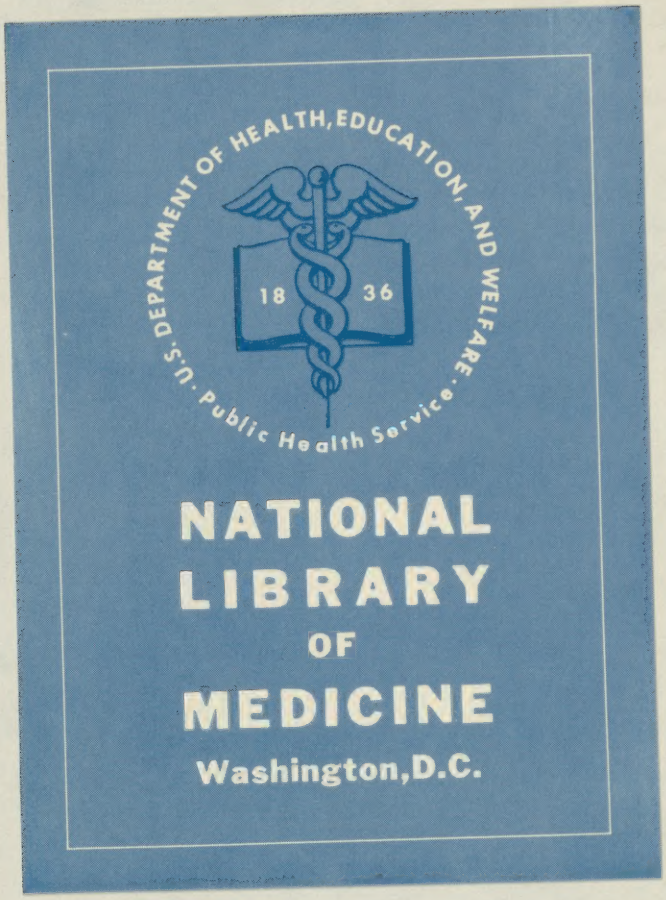

MEDICAL REFERENCE DATA FOR STAFF OFFICERS

ARMY AIR FORCES SCHOOL OF APPLIED TACTICS

MEDICAL REFERENCE DATA
FOR STAFF OFFICERS

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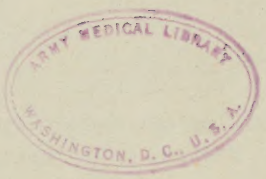
Compiled and edited by
Aero Medical Department

U.S. ARMY AIR FORCES SCHOOL OF APPLIED TACTICS
ARMY AIR FORCES TACTICAL CENTER
Orlando, Florida

FOREWORD

This compilation of medical reference data is for the use of officers of Navy, Ground, and Air Forces, who are undergoing instruction in the various special staff courses given at the Army Air Forces School of Applied Tactics. The material will aid in appreciating problems peculiar to the Air Force medical service and in visualizing the role of the surgeon as a special staff officer.

1 July 1944



MEDICAL REFERENCE DATA FOR STAFF OFFICERS

Table of Contents

Chapter One

THE MEDICAL SERVICE OF AN AIR FORCE

1. AIR FORCE HEADQUARTERS. a. The Air Force Surgeon is a special staff officer of the Air Force Commander, charged with keeping the Commander informed as to the conditions and capabilities of the medical service, and with elaborating the details necessary to carry out the Commander's decisions as they affect medical matters. The general responsibilities of the surgeon are:

(1) Advise the Commanding General on all matters pertaining to the

(a) health of the command and sanitation in the occupied territory.

(b) maintenance of physical fitness of all personnel.

(c) training of all troops in military sanitation and emergency aid.

(d) evacuation of sick and wounded within the limitations of the transportation facilities of the Air Force.

(2) Supervise technically the operation of all Medical Department troops and units of the Air Force, as a staff officer of the Air Force Commander.

(3) Supervise the procurement, storage, and distribution of medical, dental, and veterinary equipment and supplies for the Air Force.

(4) Recommend and advise the theatre surgeon as to the location of, and operation of, hospitals and other medical installations for the use of the Air Force.

(5) Prepare and preserve Medical Department records and reports necessary for the proper administration of the Air Force and the Medical Department.

(6) Supervise the assignment and reassignment of Medical Department personnel serving with the Air Force.

(7) Supervise aero-medical research and care of flyer activities.

(8) Review and certify all physical examination reports on rated personnel of the Army Air Forces and act on requests for waiver of physical defects for flying.

(9) Supervise the planning and operation of air evacuation units within the theatre of operations.

(10) Plan and provide the medical, dental, and veterinary services for the Air Force, and conduct technical medical and sanitary inspections for all Air Force units and installations.

b. Air Force Surgeon's Office. Sections of the Surgeon's Office vary to some degree, dependent upon the size and mission of the Air Force. In the larger Air Force, composed of ten or more combat groups, details of administration must be passed on to subordinates. In the large Air Force the Office of the Surgeon normally has the following sections:

(1) Administrative Section.

Ordinarily the executive officer is charged with the operation of this section, as well as the general conduct of the Air Force Surgeon's Office, and acts for the Surgeon in his absence. The section has the following functions:

(a) Advises the Air Force Surgeon on all matters pertaining to the medical service of the Air Force.

(b) Announces policies and promulgates orders in the name of the Air Force Surgeon pertaining to both the Surgeon's Office and the other activities of the Air Force medical service.

(c) Directs, supervises, and coordinates the work of all the sections of the Air Force Surgeon's Office.

(d) Provides for the security of military information in the possession of the Air Force Surgeon's Office.

(e) Reviews correspondence for compliance with established policies of the Air Force Surgeon.

(f) Prepares consolidated reports where these are not covered by other sections.

(g) Keeps current situation maps of all units and installations for the Air Force Surgeon's Office.

(h) Performs, or causes to be performed, any miscellaneous function or duty not specifically assigned to any other section of the Air Force Surgeon's Office.

(2) Professional Section. This section normally consists of four or more officers, including medical inspector, veterinarian, dental officer, and veneral disease control officer. It has the following functions:

(a) Reviews and certifies physical examination records of applicants for aeronautical rating, for air crew training, and for special examination for flying on rated personnel.

(b) Supervises the carding and reporting of physical examination reports and disposition board proceedings on rated officers or enlisted men following hospitalization.

(c) Reviews "Care of Flyer" reports, and "Medical Officer's Report of Aircraft Accident" reports.

(d) Maintains liaison with flying safety officer with respect to critical analysis of aircraft accidents and their relation to the physical qualification of flyers.

(e) Reviews all statistical reports forwarded to the Air Force Surgeon's Office.

(f) Supervises the dental services throughout the Air Force, the training of dental officers, and collection and forwarding of dental reports and returns, and furnishes advice to the Personnel Section on the assignment of dental personnel of the Air Force.

(g) Reviews sanitary reports from Air Force units and issues directives to Air Force units whenever necessary to correct sanitary defects.

(h) Maintains data concerning the health of all units and investigates any unusual incidence of communicable disease.

(i) Issues directives concerning immunization of Air Force air and ground echelons, in accordance with War Department or theatre directives.

(j) Formulates policies and methods of control of the venereal diseases, and institutes such plans for the Air Force personnel; maintains close liaison with local health departments and responsible civilian agencies; makes inspections to assist in meeting venereal disease problems; collects and analyzes data, and maintains records necessary for planning and operating venereal disease control activities.

(k) Supervises the inspection of all foods of animal origin. This rule becomes important in the Air Force serving in certain foreign theatres where sanitation is poor and proper refrigeration for animal foods does not exist. The Air Force veterinarian is responsible for obtaining intelligence regarding the incidence of food-borne diseases and diseases of animals transmissible to man, and the control measures enforced by local authorities in the occupied territory. He also collects and forwards veterinary reports.

(l) Supervises the nursing service of the command.

(3) Plans and Training Section. This Section consists of one or more officers, and has the following functions:

(a) Formulates plans and compiles logistical data to provide efficient medical support for the Air Force.

(b) Conducts inspections and surveys with a view to making organizational changes for the improvement of the medical service of the Air Force.

(c) Maintains liaison with the Air Staff to make proper recommendations to provide for efficient medical services for task forces or special missions.

(d) Establishes policies, formulates plans, and supervises all medical training in the Air Force.

(e) Prepares, reviews, and revises, training programs, training notes, schedules, and circulars for use in medical training programs by the Air Force.

(f) Studies functional systems, makes inspections, and surveys with the object of making recommendations for improvement of training and for making changes in medical training programs.

(g) Prepares charts and reports showing the status of various types of medical training in the Air Force units.

(h) Collects, classifies, and distributes to Air Force units medical intelligence data pertaining to local medical conditions and problems of a training or medical intelligence nature.

(4) Personnel Section. This section normally consists of one Medical Administrative Corps Officer, and has the following functions:

(a) Makes recommendations to A-1 of the Air Force for assignment, transfer, and replacement of Medical Department personnel assigned to the Air Force.

(b) Reviews all recommendations for promotion of Medical Department officers on duty with the Air Force.

(c) Prepares and maintains necessary files, indexes, and rosters to provide current information concerning the Medical Department personnel assigned to the Air Force.

2. **ORGANIZATION.** a. General. In a theatre of operations, there is normally only one Air Force organized in accordance with the task it is required to perform. Although no set organization can be prescribed, it is intended that the normal composition of an Air Force will embrace:

(1) Strategic Air Force.

(2) Tactical Air Force.

(3) Air Defense Command.

(4) Air Service Command.

An Air Force usually includes in addition troop carrier and reconnaissance aviation units. (Cf. FM 100-20, "Command and Employment of Air Power").

b. Medical Service. The Medical service of an Air Force is organized to fulfill the responsibilities referred to previously, by providing integral medical sections in combat and service units. In addition, three medical units peculiar to the Army Air Forces are provided as needed, the organization and functions of which are here indicated but discussed later:

(1) Medical Dispensary, Aviation. This is intended to operate with a combat group located in isolated areas where other medical service is not available. The unit is of particular importance in a war of movement, especially for use prior to the arrival of less mobile units. The dispensary has a 36-bed capacity (Cf. Par. 10).

(2) Medical Supply Platoon, Aviation. This operates with an air depot or service group for the procuring, storing, and issuing of medical supplies.

(3) Medical Squadron. Air Evacuation, Transport. This provides personnel to operate with troop carrier units within a theatre for air evacuation of casualties (Cf. Par. 19 and 30).

Chapter Two

THE MEDICAL SERVICE OF COMBAT AND SERVICE COMMANDS

3. GENERAL. The mission to be given to an Air Force in a theatre determines in large measure the structure of the various commands and the actual assignment of fighter, bomber, and service units to each of them. However whether or not the Air Force is to operate under the setup previously referred to, or as a smaller Task Air Force with a lesser number of groups, the medical service is basically the same.

4. COMBAT COMMANDS (Strategic Air Force, Tactical Air Force and Air Defense Command). The command surgeon is directly responsible to the Commanding General of the command for all medical matters pertaining to the command, and also to the Air Force Surgeon for technical matters. His functions are:

a. Advise the Commanding General on all matters pertaining to health, sanitation, emergency aid, medical support, and the physical and mental condition of all personnel, especially of air crews.

b. Supervise technically the medical service of the command and all Medical Department personnel, sections, and units thereof; and make recommendations to the Commanding General on their employment.

c. Supervise medical inspections, investigations, and reports of the medical sections of the command.

(Where a Troop Carrier Command is setup within the Air Force, the Command Surgeon would have the following additional responsibilities:

d. Supervise the planning and operation of the Medical Air Evacuation Transport Squadron in the theatre, and keep the statistical data connected therewith.)

5. AIR FORCE AIR SERVICE COMMAND. The surgeon of the Air Service Command is responsible to the Air Force surgeon for supervision of the medical supply operations of the particular Air Force. He is directly responsible to the Commanding General, Air Service Command, for the medical service for that Command. His functions are:

a. Advise the Commanding General, Air Service Command, on matters pertaining to health and sanitation of the command.

b. Supervise the training of all troops of the Air Force Air Service Command in military sanitation and emergency treatment.

c. Recommend as to priority, assignment, and transfer of medical personnel within the Air Force Air Service Command.

d. Supervise inspection of medical items received at Air Force depots.

e. Make inspections of the medical sections of the Air Force depots, sub-depots, and service groups.

f. Coordinate with, and advise the Air Force Surgeon on supply requirements pertaining to the procurement, storage, and distribution of medical supplies and equipment for the entire Air Force.

6. AIR FORCE DEPOT AND SERVICE GROUPS. a. The medical sections of the Air Depot and Service Groups of the Air Force Air Service Command are similar to the newly authorized medical sections of combat groups. These are equipped and staffed with officers and appropriate enlisted personnel to provide dispensary and supply functions. The equipment of each of the Air Depot and Service Groups is sufficient to operate a twelve-to thirty-six bed dispensary. At this dispensary casualties are retained until evacuation to Army Ground Forces or Services of Supply installations can be effected. Minor cases are not evacuated if they can be returned to duty within a few days.

b. The surgeons of Air Depot and Service Groups supervise the medical activities of the group. They are directly responsible to the group commander for all medical matters pertaining to the command, and to the surgeon, Air Service Command, for all technical matters. Their duties and responsibilities are:

(1) Advise the group commander on matters pertaining to the health and sanitation of the command.

(2) Advise the group commander on the establishment of medical installations serving the Air Depot Group.

(3) Conduct reconnaissance missions in conjunction with their subordinates to insure full utilization of medical facilities available to the Air Depot Group.

(4) Supervise the training of all troops in the Air Depot Group in military sanitation and emergency aid.

(5) Exercise technical supervision over the squadron surgeons of the group in the name of the group commander.

(6) Fulfill the duties of surgeon in technical sense, i.e. the treatment of casualties in the field.

7. WING (Bombardment, Fighter, and Troop Carrier). The wing surgeon supervises the activities of the medical personnel attached to Wing Headquarters Squadron. He is directly responsible to the wing commander for all matters pertaining to command and administration of the medical section; and to the command surgeon for technical matters. Medical supply plans and specific evacuation plans for all operations are prepared and submitted for approval to the wing commander. Where a troop carrier command is not in operation in the Air Force, the wing surgeon of a troop carrier wing is responsible for matters pertaining to air evacuation.

8. GROUP (Bombardment, Fighter, and Troop Carrier). a. The group surgeon supervises the activities of the group medical section. He is the senior flight surgeon of the group and is directly responsible to the group commander on all matters pertaining to command, and to the administration of the medical section, and to the wing surgeon for technical matters. His duties and responsibilities are as follows:

(1) Supervision of squadron surgeons on strictly technical matters in the name of the group commander.

(2) Establishment and operation of a group dispensary.

(3) Treatment of the sick and wounded.

(4) Sanitation of the group area, messes, latrines, etc.

(5) Training of group medical personnel (Cf. WD Cir 48/44 and AAF Ltr 50-16, 10 March 1944).

(6) Supervision of medical service of the group.

(7) Keeping the group commander informed on matters of military sanitation and hygiene.

(8) Conduct of periodic physical examinations of group personnel.

(9) Initiation of a group gas defense and treatment program in sanitation and hygiene.

(10) Conduct of research on aero-medical matters.

9. SQUADRON (Combat or Service). a. General. On the surface the duties of a squadron surgeon appear to be too obvious to require discussion. In practice, however his duties go far beyond mere professional care of sick and wounded personnel, and embrace many functions of an entirely advisory and an administrative character. In his advisory capacity, the medical officer acts as a special staff officer for the squadron commander; in his administrative capacity, he acts as commander of whatever enlisted medical personnel may be attached to the squadron.

b. In order to obtain the full benefits to be derived from the practice of preventive aviation medicine in operational squadrons, it is necessary that the squadron

flight surgeon intimately associate himself with every member of his squadron and with every phase of their activities. The squadron flight surgeon should participate in the recreational and social activities of the squadron flying personnel; take part in squadron games and other forms of exercise; and be present at the take-offs and return of the squadron on operational missions. From this close association with the flying personnel, the squadron flight surgeon is able more readily to detect the onset of illnesses before they become disabling. This problem can be greatly simplified if the squadron commander and the squadron flight leaders are alert and notify the flight surgeon concerning any member of the squadron who appears unfit. The formation of an informal "Flying Evaluation Board" in each squadron and composed of the squadron commander, the squadron surgeon, and the squadron flight leaders will be found of considerable value in this respect.

c. Duties. The duties and responsibilities of the surgeon are:

(1) Establish and operate a squadron aid station or dispensary as necessary.

(2) Manage the squadron sick call.

(3) Treat the sick and wounded and submit for these the required records and reports.

(4) Advise the squadron commander on all measures concerning health and fitness of squadron personnel, sanitation, and prevention of disease.

(a) It is far better to keep men from becoming sick than to cure them afterward; it is better to use all possible precautions to prevent avoidable injuries than to heal those injuries after they occur. Mere prevention of actual sickness and injury, however, is only half the story; the real objective should be to keep every member of the squadron at all times as close as is humanly possible to the absolute peak of health and physical efficiency. Only in that way can the squadron be kept at its highest possible fighting pitch. Responsibility for maintenance of such physical efficiency rests primarily with the squadron commander, but he will necessarily rely largely on his medical officer to tell him the steps to take, and see that they are carried out. While the squadron surgeon's duty in this respect extends to all squadron personnel, he will have to be especially watchful of the health of flying personnel, and should be prompt in recommending to his commander any measures which he may consider necessary to maintain or improve the physical fitness of pilots and plane crew members.

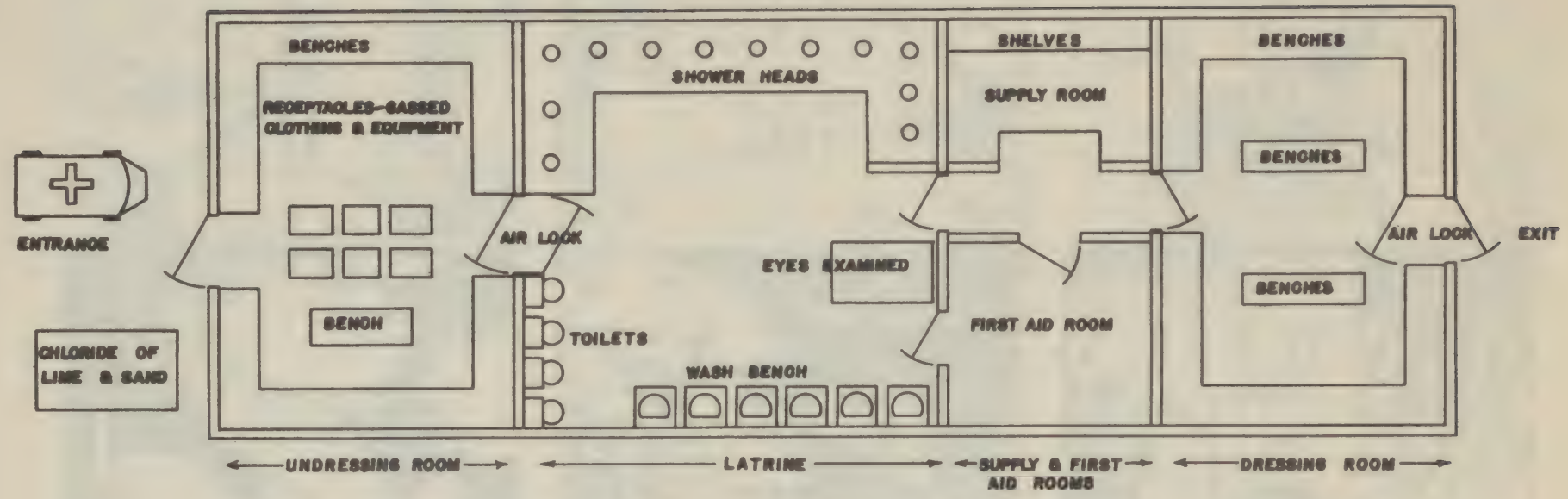
(5) Supervise and command the training and work of the squadron medical section personnel.

(6) Render such special technical reports as may be required by the Army Air Forces or by the Medical Department.

(a) While most squadrons have a special statistical officer, who is primarily responsible for many of the reports required from the squadron, some of these reports are of such a technical nature that they must be made by an officer who is professionally acquainted with their nature and substance. This will be true not only of certain medical reports, but also of various reports dealing with engineering and other technical subjects.

(7) Advise and make recommendations to the squadron commander concerning medical training requirements and the formulation and execution of plans for fulfillment of these requirements.

(a) As required by Regulations, air and combat crews must acquire sufficient knowledge of hygiene, sanitation, and emergency aid to conserve their strength and the strength of those under their supervision. Futhermore they must be able to render proper and efficient emergency aid not only to themselves but also to members of their command when regular medical personnel are not available. While responsibility for seeing that his men are properly trained in these particulars naturally rests upon the squadron commander, he will inevitably rely largely upon his medical officer to see that



SUGGESTED SET-UP OF A PERSONNEL DECONTAMINATION STATION

(SCALE- 1 INCH = 5 FEET)

FIG.NO. 1. Dummy tree mounted in box. Tree can be moved about so that its shadow will be cast against the tent's side and top; thereby breaking up form of tent.

FIG.NO. 2. Shadow of tent too regular. Tent should be sited so that full advantage of shadows cast by trees may be taken.

FIG.NO. 3. Use of net over tent to augment shadow cast by tree.

FIG. NO. 4. Dummy trees correctly placed and form of tent broken by shadow of trees.

FIG. NO. 5. This swing top can be used as a cover for a spoil pit, supply pit, etc.

FIG. NO. 6. Hammock is installed over tent to break up form of tents.

the necessary training program is carefully planned and executed. A proper program should include lectures, training films, demonstrations, and above all, opportunity for actual application by members of the squadron of emergency aid and sanitary measures taught in the program.

(8) Determine, by frequent inspection and examination, that the status and extent of medical training as noted in (7) are being maintained.

(a) One of the most effective methods of determining these factors is to give individual members of the squadron ample opportunity to demonstrate, by actual application, their knowledge of emergency aid and sanitary measures.

(9) Advise the squadron commander as to requirements for specialized medical training in defense against chemicals and treatment of chemical casualties, and under the general supervision of the commander, plan and supervise an adequate program for providing this training.

(a) The squadron surgeon is designated as gas casualty officer (Cf. AAF Reg. 25-8, Par. 31). In performing his duties the surgeon must work, of course, in close cooperation with the chemical warfare officer of his own squadron or of the next higher echelon, if his own unit has no such officer.

(10) Direct and control personnel decontamination.

(a) This is an extention of the duty noted in (9) but will be performed only after a chemical attack has taken place. Responsibility for it will be shared by the squadron surgeon, representatives of the Chemical Warfare Service, and the Quartermaster Corps, and regular Army Air Forces personnel. While the specific responsibilities of each of these branches may be modified to suit local conditions, the Medical Department personnel will, generally speaking, handle bathing and treatment of contaminated individuals.

(11) Maintain at all times appropriate camouflage of all medical installations under his control.

(a) Camouflage is designed to reduce visibility and conceal identity. It is accomplished by disruption, disguise, and concealment. Lack of a strict camouflage discipline at any airdrome may well ruin the whole camouflage scheme.

(12) A flight surgeon will in addition to these duties be charged with the duties of:

(a) Recommending relief from flying duty for officers or enlisted men who are found to be physically or mentally unfit for such duty, and making such recommendations as he deems proper, based upon his special knowledge as to care of flyers, physical exercise, recreation, and periods of rest. In this connection attention is directed to the following Army Air Forces Memorandums (AAF Memo. 25-2, 25-4, 25-5, and 25-7, Cf. Par. 31).

(b) Holding sick call for flying personnel and recommending disposition of cases excused from flying duty.

(c) Visiting flying personnel sick in hospital, and consulting with the attending medical officer regarding their care and treatment.

(d) Making special physical examinations required for flying personnel.

(e) Seeing to it that all flying personnel are properly instructed in the physiology of flight; cooperating with the personal equipment officer in seeing that flying personnel realize the importance and know the proper use of oxygen and other protective flying equipment; and reporting any defects observed in such equipment.

(13) A medical officer, prererably a Flight Surgeon or Aviation Medical Examiner, is appointed in accordance with AAF Regulation 62-14A to the Accident Investigation Committee by the Commanding Officer. He functions as a non-voting member of the Committee but otherwise with full authority to make separate reports for medical channels. The Medical Investigation Officer arranges with proper authorities to be

notified when an accident occurs. This information can be furnished most readily by the Operations Office.

Chapter Three

HOSPITALIZATION IN THE THEATRE OF OPERATIONS

10. MEDICAL DISPENSARY, AVIATION. a. In addition to the service provided by attached medical sections, there may be assigned to a combat group a Medical Dispensary, Aviation, to provide a temporary and limited type of dispensary service where organic hospitalization is neither practical nor necessary. It permits of independent operation to provide essential medical service where adequate facilities are not otherwise available in the area. (Cf. Par 30).

b. Capacity. This installation is normally a 36-bed unit with necessary hospital equipment. In addition to Air Base Group Aid Equipment, the Dispensary has assigned 4 quarter-ton trucks, 3 quarter-ton cargo trailers, and one quarter-ton 250-gallon water tank trailer.

c. Personnel. The personnel is headed by the commanding officer, a flight surgeon, with one additional medical officer, one dental officer, one Medical Administrative Corps officer, and 24 enlisted men. A smaller Dispensary normally of 24-bed capacity with a reduced personnel of three officers and 13 enlisted men has in addition been authorized (Cf. T/O & E 8-450-RS).

d. Functions. The Medical Dispensary, Aviation, provides:

(1) For the retention, treatment, and preparation of serious casualties until evacuation can be effected by motor or air ambulance to a hospital installation in the rear.

(2) For the treatment of minor casualties where hospitalization in a ground hospital is not considered necessary or practical until they are able to return to duty.

e. Employment. The unit may:

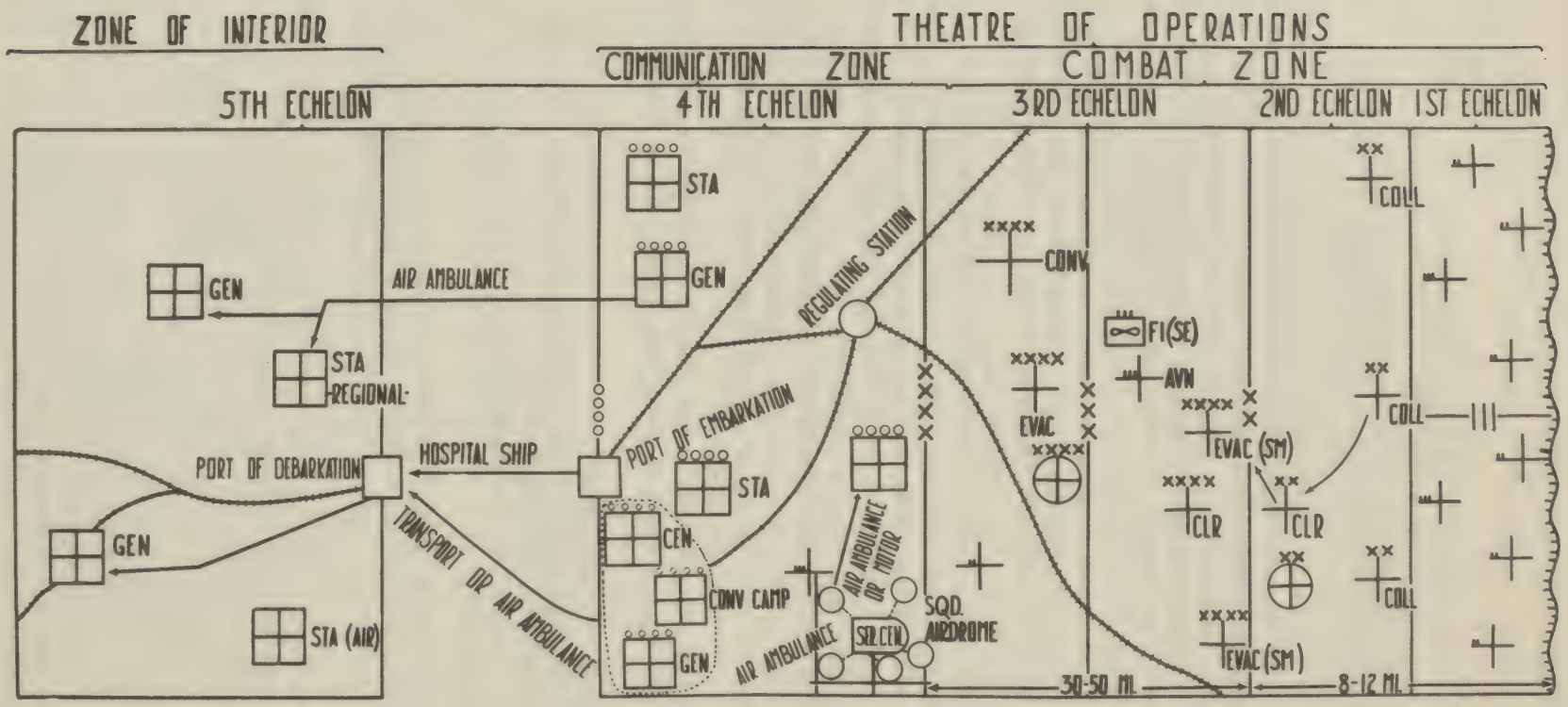
(1) Act independently in providing dispensary service for one or more combat groups located at isolated airfields.

(2) Act jointly with the medical section of a squadron or group to provide medical dispensary service.

11. MOBILE HOSPITALS. a. Organic hospitalization of Air Forces personnel, as well as for all other Army personnel, is furnished by installations of the ground forces. Likewise a major portion of evacuation of hospital cases is provided by Army Ground Forces facilities.

b. To visualize adequately the setup of the various types of mobile hospitals maintained in the theatre, one should trace mentally the course of a soldier from his unit to the Infantry Battalion Aid Station, to the Collecting Station, to the Clearing Station. In general it may be stated that all transportable casualties requiring further evacuation are moved by motor ambulance to an Evacuation Hospital, or Evacuation Hospital semimobile, within Army jurisdiction.

(1) Evacuation Hospital, semimobile. This hospital is located roughly 10 to 50 miles from the front lines, well to the rear of clearing stations, and is of 400-bed capacity (T/O 8-581). It has motor transportation and moves by shuttling. It may be housed either in existing buildings or within its own tentage. The equipment and



ECHELONS OF MEDICAL FIELD SERVICE

personnel are adequate for giving proper emergency surgical treatment and post-operative care. The personnel include not only general surgeons but those qualified in orthopedics, maxillo-facial surgery, and neurosurgery. Care given at this installation is intended to be primarily of an emergency nature. Appropriate chemotherapy may be instituted, debridement of wounds accomplished, and fractures adequately casted. Patients are held only as long as their conditions actually warrant. As soon as possible each evacuee is forwarded by rail, motor, or air ambulance to a General or Convalescent Hospital for further care.

(2) Evacuation Hospital. This hospital has a capacity of 750 patients, is relatively less mobile than the previous installation, and usually moves by rail but can be moved by Army motor convoy. In most theatres these units have been replaced largely by Evacuation Hospitals, semimobile.

(3) Portable Surgical Hospital. This is a mobile surgical unit of 25-bed capacity designed primarily for jungle operations (e.g. in New Guinea). Weighing altogether about 1000 pounds, it can be rapidly established, closed and moved by hand carry. It usually operates well forward in the vicinity of collecting or clearing stations.

(4) Field Hospital. A theatre unit, this installation is used to cover air fields, islands garrisons, or in support of small task forces where fixed bed facilities are not present and their construction not feasible. It has been designed to be highly mobile and versatile. The equipment is packed in small units and can be transported on trucks by air or any other means of transportation. It may be set up either as a single unit of 400 beds or as three separate units of 100 beds, each acting independently (T/O 8-510). It has six field ambulances, four 2½ ton trucks, and a few other vehicles.

(5) Convalescent Hospital. This installation, also located in Army jurisdiction, has a normal capacity of 3000 patients, but may be expanded for short periods to as many as 5000 beds. Located preferably near the Army Replacement Pool, it is intended to care for cases which do not warrant further definitive treatment in an Evacuation Hospital and whose duration and prognosis do not warrant transfer to a General Hospital outside the combat zone. These include venereal cases and convalescents who it is expected will be returned to full field duty within a reasonable time.

(6) Auxiliary Surgical Groups. Medical organizations under the control of the Army surgeon which play an important role in the management of battle casualties. Each group consists of pools of highly trained surgical teams, qualified not only in the field of general surgery, but also in the various surgical specialties. One group would normally be assigned to each field army. Surgical teams from it may be assigned to any one of the hospitals previously mentioned, depending on the current medical needs.

(a) The actual components of these groups: 24 surgical teams, 6 orthopedic, 6 shock, 6 gas, 4 maxillo-facial, 4 neuro-surgical, 4 thoraco-surgical, 4 miscellaneous, and 3 dental teams. Thus one or several of these teams may be assigned at one time to an Evacuation Hospital. This elasticity of utilization of personnel is highly advantageous and avoids waste of surgical teams.

12. FIXED HOSPITALS. In the communications zone, the rear-most portion of a theatre of operations, two types of hospitals are set up, namely, General and Station Hospitals.

a. General Hospitals. For a theatre, these are priority units and are established whenever armed forces proceed to a theatre. Intended to provide definitive treatment, they are opened as soon as a secure overseas base has been established. The normal capacity of 1000 beds may be expanded temporarily to about 2000 beds for short periods. The number of hospitals of this type to be employed in any area will depend largely

on the proximity of the theatre to the zone of interior. They receive cases by hospital train, motor, or air ambulance direct from Evacuation Hospitals and from other General Hospitals making retrograde secondary evacuations. Only those cases requiring special treatment, prolonged hospitalization, or those permanently incapacitated, would be transferred or forwarded to the zone of interior.

(1) Hospital Centers. When possible two or more General Hospitals with a Convalescent Camp having a capacity of 1000 beds are grouped together as a Hospital Center.

b. Station Hospital. Certain hospital facilities must be provided for the care of ordinary incidental sick and injured. At each military station or organized center there is provided a Station Hospital. These normally receive patients only from the station or center to which they are attached. In the communications zone, Station Hospitals are very variable in size and Tables of Organization are available for units from 25 beds to 900 beds capacity.

(1) As a rule all hospitals of the zone of interior have definite names. In contrast to this, fixed or mobile hospitals located in a theatre are designated and identified only by their number and type, e.g., the 6th Station Hospital, or 210th General Hospital.

13. **EVACUATION POLICY.** This is a command decision and is made by the War Department upon the recommendation, or with the concurrence of, the Theatre Commander concerned. It indicates the length in days of the maximum period of non-effectiveness for patients who will be held in the theatre for treatment. Patients, who in the opinion of responsible medical officers, cannot be returned to a duty status within the period prescribed, are to be returned to the zone of interior by the first available and suitable transportation, provided the travel required will not aggravate their disabilities. A 120-day evacuation policy has been generally accepted as a reasonable period in advance planning for fixed hospitalization in an active theatre. At the present time this is true of all theatres with the exception of Europe, China, Burma and India where a 180-day policy holds.

14. **CASUALTY ESTIMATES.** a. Losses of ground echelon personnel in air force units are occasioned primarily by disease and non-battle injuries. Rates of losses due to these causes vary widely between the various theatres. The cumulative loss rate will vary in addition with the evacuation policy operating in the theatre. Air crew attrition in a similar manner varies significantly due to differences in effectiveness of enemy resistance, climatic and geographic conditions, and operating conditions in general. The policy of enforced rest periods following completion of several combat missions further complicates computations of attrition rates. For details of methods employed in estimating casualty and replacement rates, reference should be made to FM 101-10 and FM 101-10-Air (tentative).

b. The Statistical Control Office in each overseas Air Force compiles current accurate personnel attrition rates for the particular theatre on the basis of the Weekly Status and Operations Report, AAF Form No. 34, (Cf. AAF Reg 20-11).

15. **HOSPITALIZATION OF AIR FORCES PERSONNEL.** In regard to hospitalization of AAF personnel, it has been noted that only in the zone of interior is the Air Surgeon responsible for organic hospitalization. In a theatre of operations he is responsible at the present time only for dispensary service. Supplementing the service provided by Aid Stations maintained by Squadron and Group Medical Sections, there may be assigned to each combat group a Medical Dispensary, Aviation. However, it is to be remembered that this provides merely a temporary and limited type hospitalization where General or Field Hospital type coverage is neither practical nor necessary. Moreover, casualties may be retained here only a locally designated period of time and the installa-

tion is designed primarily for retention and care of serious casualties only until evacuation can be effected by motor or air ambulance to a Services of Supply hospital. In addition, it provides treatment for minor casualties where hospitalization is not necessary until they are able to return to duty with their units.

16. **RELATIONSHIP OF AIR FORCE UNITS.** a. Casualties returning to their squadron airdromes requiring organic hospitalization are sent by motor or air ambulance to the nearest ground installation, which will usually be a numbered General Hospital, less frequently an Evacuation Hospital, or Evacuation Hospital, semimobile. From there they pass to the jurisdiction of the Army Ground Forces or Services of Supply and follow the regular chain of evacuation of the field forces. Wounded derived from planes falling in the combat area away from airdromes are cared for by the medical service of the AGF directly.

b. Plans for evacuation of Air Force units are coordinated by the Air Force surgeon. In practice this is done by tying in with the ground evacuation system normally functioning in the area in which the airdrome is situated. In the event no such facilities exist, separate Air Force facilities would have to be provided.

Chapter Four

AIR EVACUATION

17. **GENERAL.** a. The need for a more rapid means of transportation of the sick and wounded has resulted in an organized plan for the utilization of aircraft for this purpose. This is a logical evolution and fits in well with the strategy and tactics of modern warfare.

b. Definition. Air evacuation is the transportation of personnel by air from forward areas to the rear, and from theatres and bases to the zone of interior, combined with the air transportation forward of medical supplies and equipment.

18. **ADVANTAGES AND DISADVANTAGES.** a. From the medical standpoint there are, with rare exceptions, no disadvantages to the patient in being transported by air. On the contrary there are many advantages:

(1) Comfort. No other facility offers the comfort, to a seriously sick or wounded man, that air transport does. Reviewing the possible inconveniences which might be suffered in a jolting ride over war torn roads in a field ambulance will serve to illustrate this point.

(2) Speed. There is marked reduction in total evacuation time for patients requiring the facilities afforded by a general type hospital. Due to the speed with which casualties have been removed, mortality rates have been reduced to a considerable degree in head and abdominal injuries. However, it is necessary that evacuation by air, as by other means, be supervised medically through its course.

(3) Safety. If air superiority is maintained and cases properly selected, air transportation represents the safest method of transportation.

(4) Morale. The morale of the remaining effectives is kept at a higher level through a knowledge that rapid evacuation by aircraft and subsequent hospitalization is available within a few hours from the front.

(5) Treatment enroute. In aircraft designed or converted for transportation of casualties, a high quality of medical care can be provided. Such measures as the

application and readjustment of splints; administration of sedatives, stimulants, oxygen, plasma, and blood; can be carried out enroute.

(6) Evacuation where otherwise impossible. Casualties can be evacuated by air from islands and other isolated or inaccessible areas where other means of transportation are neither suitable nor available.

b. The disadvantages of air evacuation are centered mainly around the need for local air superiority in areas where this means is to be used. Since practically all aircraft used by the Army Air Forces for this purpose are not marked as ambulances and hence do not come under the protection of the Geneva Convention, adequate fighter protection is essential in those areas not completely dominated by friendly air forces. As mentioned above, in the rare instances where high altitude flight is required, selection of casualties must be made carefully to avoid the deleterious effects of lowered oxygen and barometric pressures. It is not practicable at present to provide oxygen to all occupants of transport aircraft.

19. **UNITS AND EQUIPMENT.** a. The Army Air Forces provide aircraft, crews, and suitable landing fields within a theatre. Since Troop Carrier Aviation operates aircraft which are most suitable for air evacuation, the responsibility for training the personnel involved has been delegated to the Troop Carrier Command. A School of Air evacuation has been organized in continental United States under the supervision of the Troop Carrier Command where Air Corps and Medical Department personnel are trained for this purpose. In a theatre, Troop Carrier Aviation supplies aircraft and flight personnel, the Medical Department supplies medical equipment, and specially trained medical personnel. The latter are organized into specialized units designated as Medical Air Evacuation Transport Squadrons (Cf. T/O 8-447, Par 30) under the command of a major, Medical Corps, Flight Surgeon, assisted by four additional Flight Surgeons, twenty-five Flight Nurses, and sixty-one enlisted men. This unit is normally attached by Air Force Headquarters to the Troop Carrier Wing, Group, or Squadron serving in the particular theatre or defense command.

b. Use of Air Forces equipment is limited to aircraft and the litter stanchions or web straps. These may be bolted to the sides in a few minutes in the case of metal stanchions, or left hanging from the ceiling in the case of web straps so that patients may be loaded without delay. Such equipment is built at the factory in transports to be used for air evacuation. Oxygen equipment for therapeutic purposes during evacuations has been suggested and when further developed will be provided as standard equipment by the Air Forces.

c. Medical Department equipment is provided for each aircraft employed in the form of an Air Ambulance Chest which contains drugs, bandages, hot cups, and other materials for the nursing care of patients enroute. Additional equipment may be provided as needed for patients' comfort, such as electric blankets, bed rolls, etc. Such equipment as litters and blankets are taken care of by the usual method of property exchange.

20. **PLAN OF EVACUATION.** a. In those areas where large numbers of ground forces are engaged in combat and the need for air evacuation is evident, close coordination between the Theatre Commander, the Air Commander, and their Surgeons is required for the establishment of a workable plan. In general, the Air Force, through the Troop Carrier unit and the Medical Air Evacuation Transport Squadron, will provide aircraft, personnel, and suitable airfields. The ground forces will provide medical facilities for the care of casualties within a few minutes driving time of these airfields, sometime designated as "Holding Evacuation Points." Air fields will be selected primarily for their suitability as destributing points for supplies and personnel, since that is the primary mission of the transport aircraft. The number of aircraft and frequency of flights will be determined by the Troop Carrier Unit Commander and this information

coordinated through the Air Force Surgeon to Flight Surgeons of the Medical Air Evacuation Transport Squadron at evacuation points. Maintaining close liaison with the ground forces medical officers, the latter will select patients to be evacuated on return flights. In the meantime, the Theatre Surgeon will have made arrangements for the hospitalization of the returning casualties at Evacuation or General Hospitals within his jurisdiction.

b. Priorities of evacuation. (1) Proper selection of cases by medical personnel is an important consideration in the application of aircraft to the task of evacuation. Therefore whenever possible, Flight Surgeons will select patients to be evacuated by air giving due consideration to all possible aero-medical problems involved. The necessity for air evacuation from a theatre will be guided by the following factors:

(a) Emergency cases for whom essential medical treatment is not available locally.

(b) Casualties for whom air evacuation is a military necessity.

(c) Casualties for whom prolonged hospitalization and rehabilitation are indicated.

(d) Patients suffering from certain diseases which can be improved only by treatment other than that available locally.

(e) Casualties for whom surface facilities cannot be provided due to military situation.

(2) Experience has shown that patients fall into three major categories which may be considered priorities for air evacuation.

(a) Priority I. Those requiring major nursing care.

(b) Priority II. Those requiring minor nursing care.

(c) Priority III. Those requiring no nursing care.

(3) In emergencies, air evacuation being available and feasible, all cases regardless of type will be evacuated by air.

21. EVACUATION FROM A THEATRE. a. The Air Transport Command is responsible for air evacuation from a theatre or defense command to the zone of interior. The Air Transport Command accomplishes this mission by means of transport planes operating under the technical control of Air Transport Command Wings, which maintain routing schedules of transport planes to all theatres and defense commands. These transport planes carry from twelve to forty recumbent patients each. To each Air Transport Wing is assigned, where necessary, one or more Medical Air Evacuation Transport Squadrons to provide necessary Medical Department personnel and facilities for efficient medical service for all casualties evacuated by air.

b. Priorities for the evacuation of casualties to the Zone of Interior are established by the Priorities Division, Air Transport Command, in coordination with the Air Surgeon. Once placed abroad an Air Transport Command plane, a patient retains his priority for transportation during the flight to the zone of interior terminus of the Air Transport Wing.

c. Air evacuation to the United States is accomplished upon call of the theatre or defense commander on the Air Transport Command. This administrative procedure is generally accomplished by representatives of these commanders (who are commanding officers of theatre or port hospitals) communicating directly with the Wing Commander the Air Transport Wing operating in that particular theatre or base. The report to the Wing Commander includes the following data:

(1) The Station on the Air Transport Command route where patients are contrated for air evacuation to the zone of interior.

(2) The number and type of patients to be evacuated by air.

d. The actual coordination and operation of air evacuation from the theatre to

the zone of interior is the responsibility of the Commanding General, Air Transport Command Wing, who is assisted by the Wing Surgeon.

22. EVACUATION WITHIN THE ZONE OF INTERIOR. Casualties evacuated by air from a theatre or defense command, are brought into the United States at terminals of the Air Transport Command Wings, at which are located Army Air Forces bases with hospital facilities available for immediate hospitalization. From these hospitals casualties are distributed to various General Hospitals within the zone of interior by means of rail, motor, or further air evacuation, dependent upon the circumstances. In some instances movement by air from a theatre may be direct from the overseas base to a zone of interior General Hospital. Furthermore, casualties occurring within the zone of interior itself, either because of the peculiar nature of the case or the isolated character of its location, may be evacuated by aircraft to a civilian or military hospital.

CHAPTER FIVE

PREVENTIVE MEDICINE

23. SANITARY SURVEY. a. General. A sanitary survey is an analysis of conditions existing in a situation which exert a favorable or unfavorable influence on the health of troops. It is conducted to secure information which will indicate:

(1) The most practical means by which disease can be prevented.

(2) The most practical and rapid method of controlling disease.

(3) How the general health conditions can be improved.

b. Scope. A sanitary survey may consist of a general and complete study of all the conditions within a command which actually or potentially affect health, or it may be limited in scope and restricted to the consideration of some special factor.

c. Limited Survey. A limited survey usually is made as indicated by the existing health situation for the purpose of controlling or preventing the occurrence of some particular disease or diseases. Such a survey may be made, for example, of a water supply system where it would have for its objective the detection and correction of conditions affecting the potability of the water and control or prevention of intestinal diseases.

d. General Survey. In a military station or in an Air Force unit in the field, the military personnel differ in certain fundamental respects from a native or civilian population, and the environment of a military organization may be vastly different from that of the surrounding native communities. Nevertheless, any airdrome is an integral part of the general community within which it is situated and a complete sanitary survey cannot, therefore, be restricted to the station concerned, but must include the pertinent conditions existing in the surrounding civilian communities. Thus the general sanitary survey may be considered in two parts:

(1) That pertaining to the station or command proper.

(2) That pertaining to conditions in nearby civilian communities which would affect the health of the troops concerned.

24. CONDUCT OF A SANITARY SURVEY. Usually the factors to be considered in a sanitary survey can be placed in certain broad, general, but fairly well defined groups. These groups are not fixed but are extremely flexible. Local conditions will at times require additions and changes in the nature of the data to be obtained. The outline presented

is suggested as a guide in the conduct of a sanitary survey but it does not constitute a form which can be adhered to in all instances in the theatre:

a. General Sanitary Survey of a Military Station or Command.
   (1) General.
      (a) Designation of station (if more than one unit, list all units concerned).
      (b) Strength.
      (c) Mission.
      (d) How is the medical service provided.
   (2) Environmental.
      (a) Topographical features.
      (b) Housing.
         (1) Barracks, tents, and hutments.
         (2) Exchanges.
      (c) Latrines and showers.
      (d) Mess halls and kitchens.
      (e) Water supply.
      (f) Waste disposal.
         (1) Human.
         (2) Garbage.
      (g) Food and nutrition.
         (1) Rations.
         (2) Storage.
         (3) Preparation.
         (4) Food handlers.
      (h) Recreational facilities.
         (1) Athletics.
         (2) Passes.
         (3) Recreation rooms or tents.
      (i) Insect survey.
      (j) Mosquito survey.
      (k) Personal hygiene - laundry facilities.
      (l) Disease prevalence.
      (m) Subjects not covered by the headings.
      (n) Recommendations.

b. General Sanitary Survey of Civilian Communities.
   (1) Towns or cities accessible to troops on passes.
      (a) Environmental factors.
         (1) Water supply (all native water - "off limits").
         (2) Character of restaurants and other eating places.
         (3) Crowding in theatres, streetcars, etc.
         (4) Prevalence and control of insect vectors.
      (b) Economic conditions.
      (c) Recreational facilities for the troops.
      (d) Prostitution.
         (1) Laws relating to.
         (2) Extent of.
      (e) Disease prevalence.
   (2) Rural areas accessible to the troops.
      (a) Economic conditions of the population.
      (b) Water supplies ("off limits").
      (c) Terrain - prevalence of mosquito breeding areas.

(d) Insect vectors - control.

(e) Prevalence of disease.

(1) Epidemic and endemic diseases prevailing.

(2) Sources of infection.

c. Limited Sanitary Survey.

(1) This is made as indicated by the existing health situation with consideration of all general points, and a study of such environmental factors as are pertinent.

25. **SANITARY ORDER.** The following is the general form for a Sanitary Order:

Organization
Location
Date (day, month, year)

GENERAL ORDER)
NO.)

1. **GENERAL.** The following provisions for the sanitation and health of this command are published for the information and guidance of all concerned.

a. Responsibility of the unit commander for the sanitary and health conditions of the command.

b. The surgeon of the command: duties and responsibilities in all matters relating to sanitation and the health of all personnel.

c. The medical inspector: authority, general duties, and reports to be made direct to the surgeon of the command.

d. The general police officer, when one is designated: his relation to the surgeon and medical inspector.

e. Water supply: sources for drinking, cooking, bathing, washing of clothes and vehicles. Installation, care, and protection of water sterilizing bags; chlorination of water.

f. Food and messes: responsibility for preservation of food and foodstuffs; cleanliness of and inspection of food handlers; cleanliness of utensils and fixtures in all kitchens, messes, bakeries, and exchanges; washing of mess kits.

g. Waste disposal: separation and disposal of all wastes, tin cans and garbage. Personnel employed in the process, time of removal, and method of final disposal. Construction, number, location, size and care of incinerators, latrines, and urine soakage pits.

h. Quarters: number of individuals per tent, orderliness, cleanliness, airing of bedding, overcrowding, arrangement of beds for sleeping.

i. Insect control: fly prevention, destruction of breeding places, material to be used in the prevention of fly breeding, destruction of flies. Mosquito control, proper drainage, treatment of water holes, stagnant pools, and low ground near slow-running streams. Methods to be employed in the prevention of breeding and destruction of larval forms and adult mosquitoes. Protective measures, screening.

j. Personal hygiene: washing of hands, bathing, washing clothes, shaving and cutting of hair, and care of the feet.

k. Dispensaries: establishment, location, and marking. Time of sick call.

l. Venereal prophylaxis: location, number, and marking of stations.

m. Physical inspection: time and place of examination of troops. Examinations on arrival and departure from camp.

n. Immunization: character, time, and place.

o. Special measures for control of communicable diseases; detection of diseases, disinfection and disinfestation treatment of individuals; treatment of clothing and bedding.

2. CIVILIANS (where applicable). All civilians and civilian organizations attached to this command will comply with this order insofar as it applies to them.

By order of_____:

_____
(Name, rank, and office)

OFFICIAL:

_____
(Authenticating officer:
name, rank, arm, and office)

DISTRIBUTION:

26. MALARIA CONTROL PROGRAMS. a. Mosquito surveys are conducted for the purpose of determining the most feasible and most rapid procedures for controlling the disease transmitting species in the area under consideration. Normally the most important features of a mosquito survey are the identification of the genera and species involved, study of the relative density and importance of each, and the location of the breeding places of the species. In making a mosquito survey and deciding upon the control measures to be instituted, consideration must be given to the degree of protection required or obtainable and the facilities available in the theatre for mosquito control purposes. It may be that the mission of the command or the exigencies of the military situation may render it inexpedient to attempt to obtain more than partial control of a varying degree. On the other hand, the conditions at fixed fields or in a relatively static theatre may be such that the disease-bearing mosquitoes can be adequately controlled.

b. The following outline will be useful in understanding the scope of an adequate plan for mosquito control program:

(1) Estimate of the malaria situation in the area.

(a) Statistics pertaining to malaria.

1. From Medical Intelligence Branch, Preventive Medicine Division, Surgeon General's Office.

2. Among the military population of the installation.

3. Among the civilian population in the vicinity.

(b) Malaria reconnaissance. Surveys of the native population, where possible, resulting in

1. Information as to type present.

2. Information as to intensity and incidence.

3. Information from spleen and blood examinations.

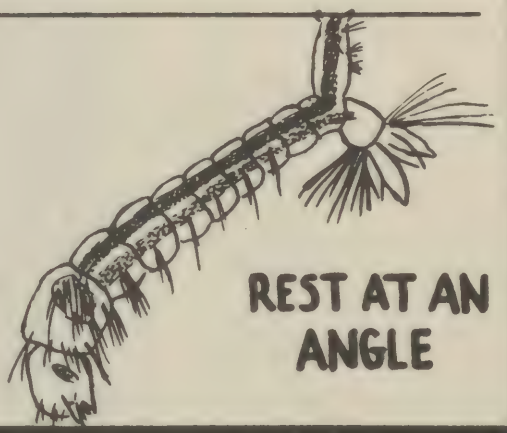
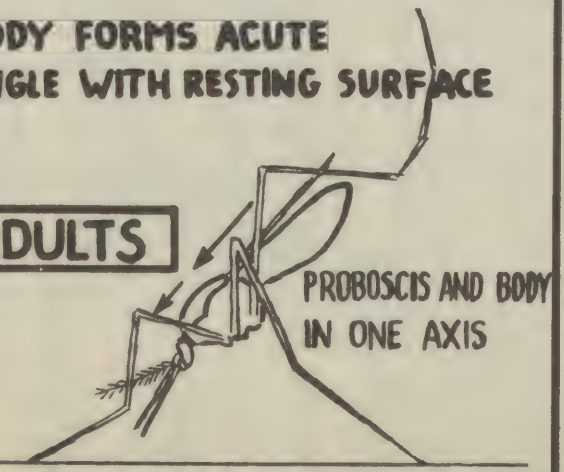
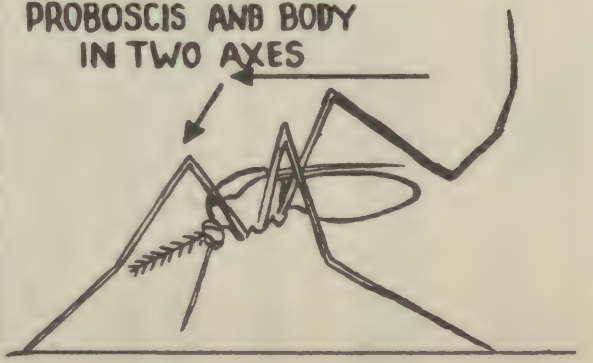
(c) Mosquito survey.

1. Prevailing genera and species.

2. Nature of terrain.

3. Survey on foot of all places which appear suitable for mosquito breeding, including in addition to usual bodies of water, artificial receptacles, tree

KEY FOR IDENTIFYING MOSQUITOES

ANOPHELES	AEDES AND CULEX
 LARVAE — REST PARALLEL TO WATER SURFACE	 REST AT AN ANGLE
BODY FORMS ACUTE ANGLE WITH RESTING SURFACE  ADULTS — PROBOSCIS AND BODY IN ONE AXIS	BODY PARALLEL TO THE RESTING SURFACE  PROBOSCIS AND BODY IN TWO AXES

holes, and bromeliads. This entails actual dipping for and identifying of larvae; and catching and identifying adult mosquitoes in the area.

4. Climatic conditions.

5. Facilities for control work.

6. The status of disease (infection present, vectors present and pests present).

7. The military situation.

(2) Conclusions.

(a) Decision as to necessity for a control program.

(b) Specific plans for mosquito control program.

1. Map survey showing installation and adjacent area and indicating by numerals or letters all streams, ditch tributaries, swamps, ponds, depressions, and areas of heavy vegetation.

2. Estimate of work required covering details of methods of control indicated and materials to be used.

(c) Recommendations submitted to

1. Commanding Officer of the local installation.

2. Air Force Commander through the Air Force Surgeon in cases where an extensive project is indicated.

27. VENEREAL DISEASE CONTROL. a. The methods employed in venereal disease control fall into the three general classifications of recreation, suppression, and education. It is the aim of the first two of these to reduce to a minimum the opportunity for exposure to venereal diseases; and the intent of the third, to teach methods of protection from venereal diseases for those exposures which still may occur. Venereal disease control further concerns itself with the measures associated with treatment.

(1) Recreation. This phase is intimately connected with the control of venereal disease, for if personnel have adequate recreational and athletic facilities available to occupy their free time in healthful and interesting pursuits, they are less likely to spend their time off-duty in questionable surroundings inimical to their health and welfare and conducive to the spread of venereal disease. Hence, every effort should be made to see that wholesome recreational activities are provided for the men to occupy their free time in so far as it is possible.

(2) Suppression. The War Department is committed to an objective of suppression of prostitution and the elimination of segregated areas of possible infection surrounding our military establishments. for it has been found that such areas serve as focal points for the operation and spread of vice activities intimately connected with the dissemination of venereal disease. Every commanding officer is urged to enlist the aid of local authorities in eliminating such unsatisfactory conditions. (Cf. AR 410-210, 15 September 1942; WD Cir Ltr 12 and 249, 1943). Attention also is directed to AG Ltr 250.1, 31 July 1943, subject, "Improvement of moral conditions in the vicinity of camps and stations." Military authorities including military police must cooperate with civilian authorities in the suppression of prostitution.

(3) Education. Under this broad heading are grouped the measures aimed at personal prevention of venereal diseases:

(a) Thorough education of all personnel in the nature of, method of transmission of, and means of preventing the various venereal diseases. This education, to be repeated at periodic intervals, should consist of technical instruction by the unit surgeon, and talks by the commanding officer and the chaplain. The dangers of venereal diseases and the methods of prevention, as well as the importance of continence and and self-control, should be stressed. In view of rising rates among officer personnel, they should not be omitted from the educational program.

(b) Lectures must be simple, non-technical and should be supplemented by

the use of films, pamphlets, and posters, in order to emphasize important points. The object of contact tracing should be stressed at some point in the discussion. Venereal disease prevention training aids are available through AGO channels and from the Venereal Disease Control Section of the various Air Force Commands. Many of the Air Force Commands issue monthly Venereal Disease Control Bulletins to keep medical and other personnel informed of the new developments in the venereal disease field, current changes in Regulations, and other points of interest.

(c) Adequate and convenient prophylaxis facilities and materials. An Army prophylactic station should be placed in operation as soon as feasible. Individual mechanical and chemical prophylactic materials should be made readily available to all personnel. Medical officers should be familiar with the methods specified for the distribution of prophylactic items (Cf. WD Cir 125, 30 March 1944.) Medical Supply Officers will have these items for purchase or issue to organizations depending on the status of the unit.

b. Treatment. One of the primary aims of treatment of venereal disease in military personnel is to get the individual back to duty as soon as possible. This objective may be accomplished in keeping with sound medical and public health principles. Every effort should be made to get the infected individual diagnosed and under effective treatment promptly. (Cf. TB Med 9, "Penicillin;" TB Med 16, "Penicillin Treatment of Resistant Gonorrhea;" and AAF Ltr 25-6, 29 March 1944, subject, "Penicillin Treatment in the AAF, Continental Limits of the United States." At the monthly physical inspections of all personnel, particular attention should be given to detection of venereal disease. Army Regulations provide severe penalties for individuals who fail to report the presence or suspected presence of a venereal disease (Cf. AR 40-210, Par 23 e, and AAF Memo 25-11, 10 November 1943).

c. Contact tracing. In order to break the chain of infection, every effort should be made to secure from the infected individual information as to the source of his infection. This information should be reported promptly to the appropriate health authorities, if available.

d. Medical Officers serving with colored troops should familiarize themselves with WD Cir 88, 28 February 1944, "Venereal Disease Control among Negro Troops."

Chapter Six

APPENDIX

28. GENERAL FORM FOR A MEDICAL ANNEX TO AN ADMINISTRATIVE ORDER.

Issuing Unit (may be coded)
Place of issue (omit if secret)
Date (day, month, and year)

MEDICAL ANNEX)
Annex No._____ to Adm O_____)

Maps:

1. SUPPLY.
   a. Medical supply points. (Location, hour of opening, and closing, organizations served.)
   b. Other medical supply details. (Recommendations covering policies, general instructions, requisitions, and salvage.)
2. EVACUATION.
   a. Aid Stations. (Location, units served, hour of opening, and closing, and equipment.)
   b. Dispensaries. (As above.)
   c. Hospitals. (As above, relating to ground installations.)
   d. Routine channels and policies governing evacuation by air and ground.
   e. Burial. (Arrangements for burial at medical installations.)
   f. Salvage. (Instructions regarding collection and evacuation.)
   g. Prisoners of War. (Security of sick and wounded, utilization to augment medical service.)
3. TRAFFIC.
   a. Circulation. (Special priorities desired for ambulance or other medical transport.)
4. TRANSPORTATION.
   a. Air Transport. (Location and operation of air ambulances.)
   b. Ground Ambulances. (Location and operation of motor pools.)
5. PERSONNEL.
   a. Stragglers. (Arrangements for disposition of stragglers and malingerers in medical installations.)
   b. Mail.
   c. Shelter.
6. MISCELLANEOUS.
   a. Sanitation.
   b. Administrative Reports.
   c. Administrative matters not otherwise covered.

By Command of_____:

_____
(Name, rank, and office
Executive O or C/S.)

OFFICIAL:

_____
(Authenticating officer:
name, rank, office)

DISTRIBUTION:

(list or code letter.)

29. **TYPE ADMINISTRATIVE ORDER WITH ANNEX.** The following type Administrative Order with Medical Annex is based in part on an actual order. Dates, names, and places are fictitious:

Thirtieth Air Force
ATHENS (V4343)
1 July 1944

Adm O 2

Map: Aeronautical Chart, The BALKANS, 1:700,000, 1942.

1. SUPPLY.
   a. Railheads.
2. EVACUATION.
   a. Casualties.
      (1) Hospitalization: SALONIKA (Q 4074).
      (2) Casualties requiring immediate hospitalization at places removed from SALONIKA will be cared for by arrangement with the nearest military installation where facilities are available.
      (3) Evacuation of casualties from points removed from SALONIKA by AP, Mtr, or RR, as determined by unit or dispensary Surg, depending upon nature of disease or injury and the available means of transportation.
   b. Burial.
7. MISCELLANEOUS.
   a. Sanitation. (See Med Annex and Gen O 4, 7 Apr 1944, Hq Thirtieth AF).

By Comd of Brig Gen JONES:

WAINWRIGHT
C/S

OFFICIAL:

/S/
Brown
A-4

Annexes:
1 - Air
2 - Sig
3 - Engr
4 - Med

DISTRIBUTION:
"A"

Thirtieth Air Force
ATHENS (4343)
1 July 1944

Annex 4 to Adm O 2

Map: Aeronautical Chart, The BALKANS, 1:700,000, 1942.

1. SUPPLY.

a. Class I Supply. Subsistence for Dispensaries will be obtained from units as prescribed by the CO of the Adrm concerned.

b. Class II and IV supply. Med supplies and equipment will be drawn from the Serv Cen, except for units in the near vicinity of KHALKIS, which will use the AF Gen Dep facilities.

c. Level of medical supplies. Unit aid Sta, 10 days; Med Dispensary Avn, 20 days; Serv Cen, 30 days; and AF Gen Dep, 60 days.

d. Requisitions.

(1) Requisitions will be designated as informal, formal, and emergency.

(2) Informal requisitions normally will be submitted semi-weekly on Monday and Thursday by unit aid Sta and Dispensaries.

(3) Formal requisitions will be submitted on WD QMC Form 400, 401, in quadruplicate, by the Serv Cen and will include items of authorized equipment.

(4) Emergency purchases may be made by the Med Sup O at Med Sup sources (Serv Cen and AF Gen Dep).

2. EVACUATION.

a. Aid Stations. Gp, Sq, and Bn (Avn) Aid Stas will be established and maintained where equipment and personnel are assigned for such duty. These Stas will serbe any other unit in the vicinity without Med personnel as designated by the CO of the Adrm concerned on the recommendation of the Surg. Personnel and equipment in Gps will be pooled with the establishment of a single aid Sta whenever possible. T/E equipment only will be used.

b. Dispensaries. (1) Facilities will be established by numbered Med Dispensaries Avn as designated by this Hq. The senior Flt Surg assigned to a Med Dispensary will act as Adrm Surg and Adrm Med Insp for the installation to which assigned. He will be responsible for the Med care and reports pertaining thereto of Orgns with no Atchd Med O.

(2) Unit Surgeons will cooperate by making available assigned MD personnel to the Med Dispensary Avn in emergencies.

(3) When the Dispensary Surg is also a unit Surg, he will perform all duties pertaining to his unit as a Sep Orgn, in addition to his duties as Dispensary Surg.

(4) Retention of patients for a period up to 10 days in a Med Dispensary Avn is authorized.

c. Hospitalization.

(1) Casualties requiring hospitalization will be evacuated to the Hosp located at SALONIKA.

(2) When facilities are temporarily inadequate, bed credits will be obtained by this Hq and additional instructions issued.

d. Channels of Evacuation. The routine channels of evacuation will be from Aid Sta to Med Dispensary Avn, and from Dispensaries to the designated Hosp; or directly from Unit Aid Sta to the designated Hosp. All unit Aid Stas will make use of existing facilities where Med Dispensaries Avn are provided.

e. Air Evacuation.

(1) Normally A Evac is to be utilized wherever possible.

(2) The Flt Surg controlling A Evac will designate the following priorities;

(a) Priority I. Patients requiring major nursing care in Flt.

(b) Priority II. Patients requiring minor nursing care enroute.

(c) Priority III. Patients requiring no nursing care.

(3) The 604th A Evac T Sq (-) Atchd to the 10th TC Sq is responsible for Med supervision of A Evac.

f. Burial. Will be through arrangements with the Serv Cen serving the unit.

g. Salvage.

(1) All items of unserviceable MD equipment considered worth repairing will be turned in to the Med Sup source. Reissue of non-expendable items will be by the exchange method.

(2) Exchange forms will be provided by the Med Sup source.

3. TRANSPORTATION.

a. Air.

(1) The following Adrms are designated as holding Evac Cen: STIP (Q3387), and EDESSA (Q3176).

(2) Except in cases of extreme urgency, all patients to be evacuated by A will be transported by available Amb or Amb substitute to the nearest designated holding Evac Cen.

(3) Flt Surg of the 604th A Evac T Sq will coordinate with this Hq regarding periodic Evac flights.

b. Motor.

(1) Senior tactical CO of Adrms will direct Orgns under their control to furnish Med Dispensaries Avn, when assigned, a roster of motor Ambs to be available for the units of the Adrm Area. One of the available Ambs will be maintained at the Dispensary. Units whose Ambs are absent from their normal Sta at any time will be adequately covered with Amb service by coordination with other units in the vicinity.

(2) An Amb pool will be maintained at each Serv Cen. Ambs will be dispatched as necessary by the CO of the Serv Cen, on call by Surg, when adequate Amb facilities are not present at Adrm areas. Requests for Ambs to the Serv Cen in other than emergencies will be submitted prior to 1000 daily.

4. MISCELLANEOUS.

a. Sanitation. COs will publish Gen O governing the Sn provisions of their Comd. These will be based on local conditions and directives from higher Hq.

b. Administrative Reports. Adm reports will be as required by higher Hq.

By Comd of Brig Gen JONES:

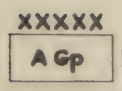
WAINWRIGHT
C/S

OFFICIAL:

/s/
WHITEHEAD
Col, MC

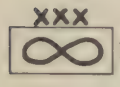
DISTRIBUTION:
"A"

ARMY AIR FORCES — CONVENTIONAL SIGNS



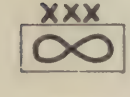
THIRD — Third Army Group

FIFTH — Fifth Air Force



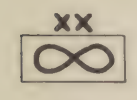
II SAF — II Strategic Air Force

II TAF — II Tactical Air Force

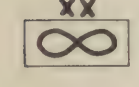


III A Def — III Air Defense Command

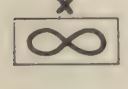
IV A Serv — IV Air Service Command



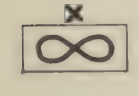
5 Str — 5th Strategic Air Division



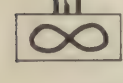
7 Tac — 7th Tactical Air Division



9 Bomb (H) — 9th Bombardment Wing (Heavy)

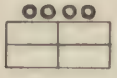


11 TC — 11th Troop Carrier Wing



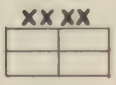
14 Bomb (M) — 14th Bombardment Group (Medium)

16 Fi (SE) — 16th Fighter Squadron (Single Engine)

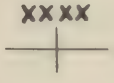


210 Gen — 210th General Hospital

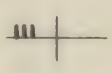
802 A Evac — 802nd Air Evacuation Transport Squadron



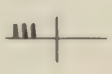
18 Field — 18th Field Hospital



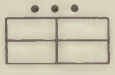
Port Surg — Portable Surgical Hospital



Group Aid Station



Avn — Medical Dispensary, Aviation



16 Sup Avn — 16th Medical Supply Platoon, Aviation

Dep — Army General Depot (CZ)

Dep — Medical Supply Depot (CZ)


Dep — Air Force General Depot


16 Serv — 16th Air Force Service Center

R Sta — Regulating Station

30. TABLES OF ORGANIZATION. In addition to certain current Tables of Organization of medical sections presented in diagrammatic form, the following manning tables are included for instructional purposes only:

a. Medical Section, Headquarters, Group (Bomber, Fighter, Troop Carrier, Air Depot, and Service).

Major		1[a]
Captain		1[b]
1st Lieutenant		1[c]
Total commissioned		3
Tech sergeant, including		1
Medical NCO	(673)	(1)
Sergeant, including		6
Administrative NCO	(502)	(1)
Flight Surgeon's asst	(857)	(1)
X-ray technician	(264)	(1)
Sanitary technician	(196)	(1)
Pharmacy technician	(859)	(1)
Surgical technician	(861)	(1)
Corporal, including		5
Dental technician	(855)	(1)
Medical technician	(409)	(2)
Surgical technician	(861)	(1)
Hospital orderly	(303)	(1)
Private, first class) Private) including		7
Ambulance driver	(699)	(1)
Administrative clerk	(501)	(1)
Medical technician	(409)	(2)
Surgical technician	(861)	(1)
Hospital orderly	(303)	(2)
Total enlisted		19
Aggregate		22

a. Flight Surgeon, except Air Depot and Service Groups.
b. Dental Corps.
c. Medical Administrative Corps.

When functioning in a group operational area, all medical personnel of the group and squadron will be pooled to provide the most efficient medical service. In case of the dispersal of squadron, the group surgeon will be responsible that adequate medical personnel and equip- are available.

b. Medical Section, Headquarters, Squadron (Bomber, Fighter, Troop Carrier Depot Supply, Depot Repair, Service, Photographic, and Reconnaissance.)

Captain		1[a]
Total Commissioned		1
Staff Sergeant, including		1
Medical NCO	(673)	(1)
Corporal, including		1
Surgical technician	(861)	(1)

a. Flight Surgeon, except Service, Depot Repair, and Supply Squadrons.

When functioning in a group operational area, all medical personnel of the group and squadron will be pooled to provide the most efficient

Private, first class) Private)	including	1
Ambulance driver	(699)	(1)
Total enlisted		3
Aggregate		4

medical service. In case of the dispersal of squadron, the Group Surgeon will be responsible that adequate medical personnel and equipment are available for all units of the group.

c. Medical Section, Squadron (not an integral part of a group for operations.)

Captain		1[a]
Total Commissioned		1
Staff sergeant, including		1
Medical NCO	(673)	(1)
Corporal, including		2
Surgical technician	(861)	(1)
Medical technician	(409)	(1)
Private, first class) Private Including		2
Ambulance driver)	(699)	(1)
Adm & Tech clerk	(501)	(1)
Total enlisted		5
Aggregate		6

a. Flight Surgeon. This table intended for Headquarters Squadrons, Anti-Submarine, Night Fighter, Composite and Sea Search Attack Squadrons, etc.

31. **REGULATIONS, MEMORANDUMS, AND TRAINING STANDARDS.** a. The following Army Air Forces Regulations to which frequent reference is made are included:

(1) AAF Reg 20-11 Functions and Responsibilities of Statistical Control Offices.

(2) AAF Reg 25-7 Venereal Disease Control.

(3) AAF Reg 25-8 Gas Defense and Treatment Program of Air Force Establishments.

(4) AAF Reg 25-8A Medical Training in Defense against Chemicals and
25-8B Treatment of Chemical Casualties.

(5) AAF Reg 55-7 Personal Equipment Officer
55-7A

(6) AAF Reg 65-1 Supply and Maintenance of Army Air Force Units.

b. The following Army Air Forces Memorandums are included:

(1) AAF Memo 25-4 Prevention of Flying Fatigue.

(2) AAF Memo 25-5 Vision at Night.

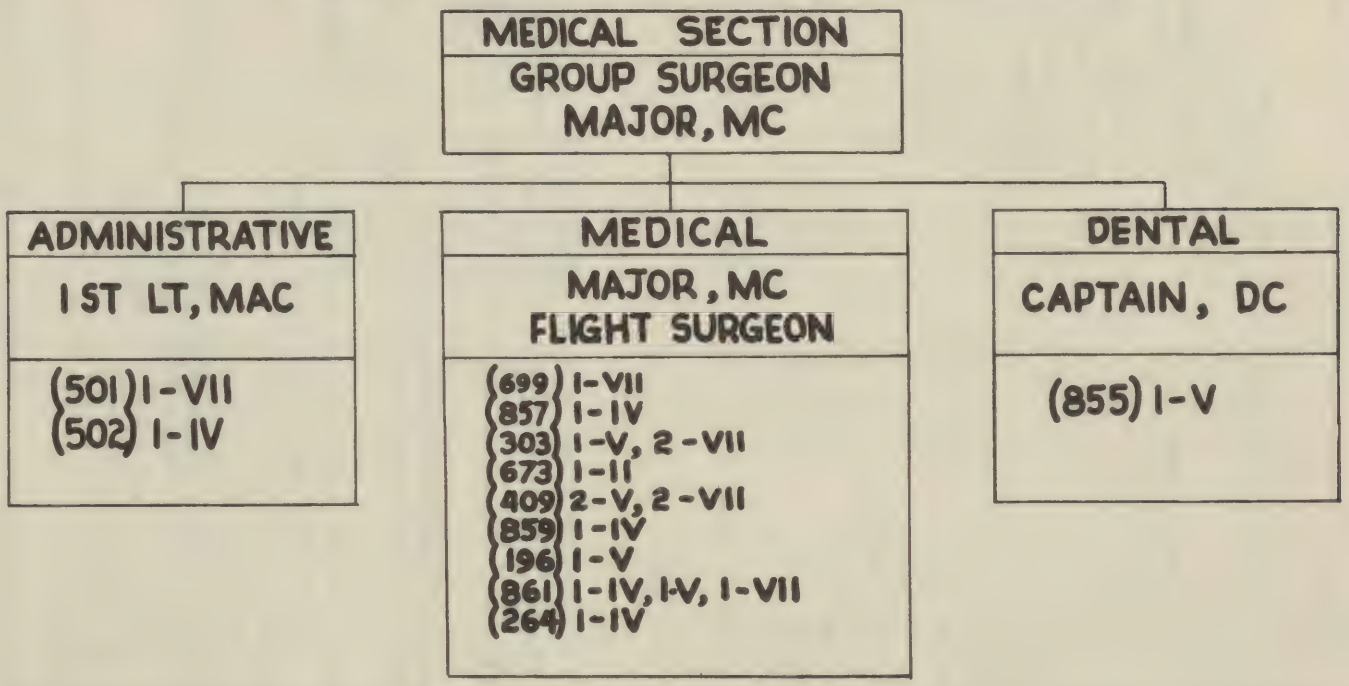
(3) AAF Memo 25-7 Physical Examination of Personnel assigned to High Altitude Stations.

c. The following Army Air Forces Training Standards are included:

(1) AAF Tng Standard 110-1-1 Training for Units and Individuals of the Medical Department of the Army Air Forces.

(2) AAF Tng Standard 110-2 Medical Training for all AAF Units and Individuals.

ARMY AIR FORCES
ORGANIZATION MEDICAL SECTION
HQ TROOP CARRIER GROUP
AS PER T/O & E NO 1-312, DATED 4 NOVEMBER 1943

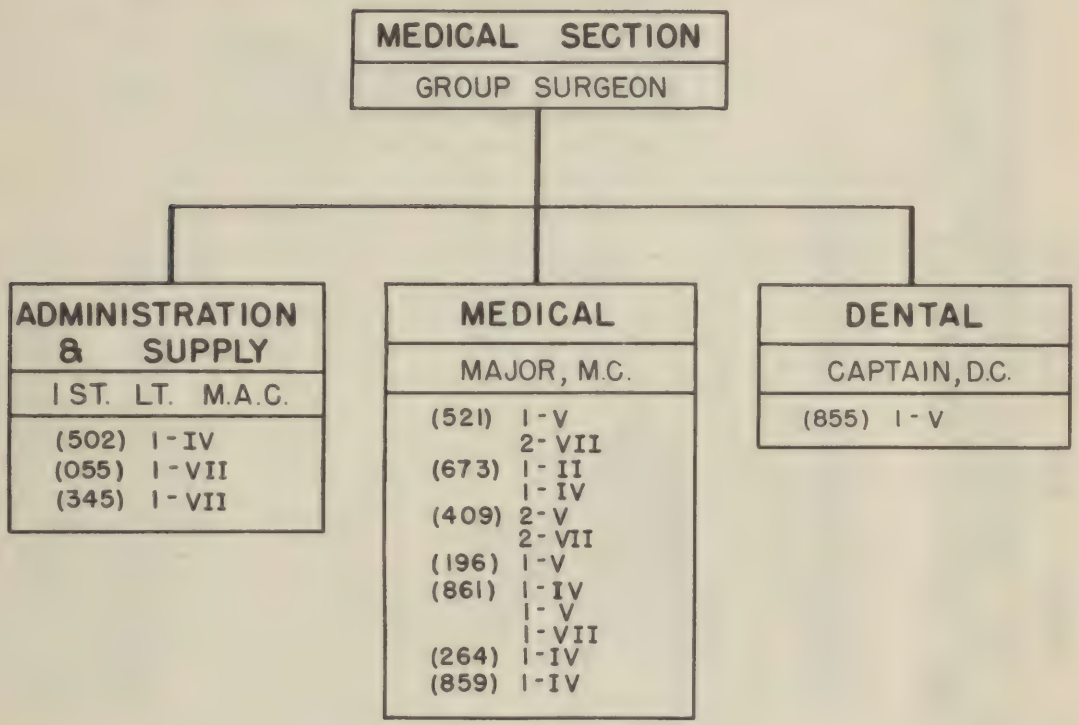


LEGEND					
(501)	ADMINISTRATIVE CLERK	(673)	MEDICAL NCO	II	- T/SGT
(502)	ADMINISTRATIVE NCO	(409)	MEDICAL TECHNICIAN	IV	- SGT
(699)	AMBULANCE DRIVER	(859)	PHARMACY TECHNICIAN	V	- CORP
(855)	DENTAL TECHNICIAN	(196)	SANITARY TECHNICIAN	VII	- PVT
(857)	FLT SURG ASSISTANT	(861)	SURGICAL TECHNICIAN		
(303)	HOSPITAL ORDERLY	(264)	X-RAY TECHNICIAN		

ARMY AIR FORCES

ORGANIZATION MEDICAL SECTION, HQ. & HQ. SQ. AIR DEPOT GROUP

AS PER T/O & E 1-852, DATED 20 JANUARY 1944

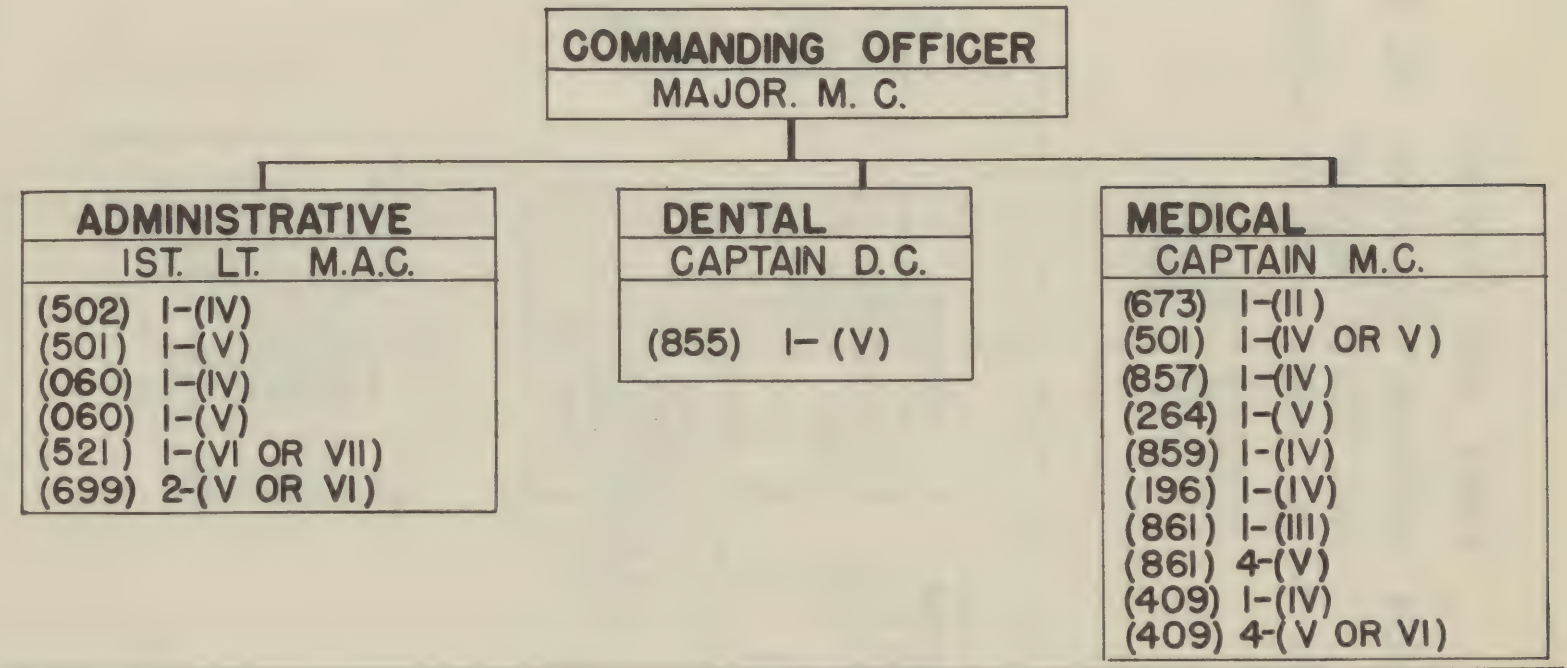


LEGEND

502 - ADMINISTRATIVE NCO
055 - CLERK, NON-TYPIST
345 - AMBULANCE DRIVER
521 - HOSPITAL ORDERLY
673 - MEDICAL NCO
409 - MEDICAL TECHNICIAN
196 - SANITARY TECHNICIAN
861 - SURGICAL TECHNICIAN
264 - X-RAY TECHNICIAN
859 - PHARMACY TECHNICIAN
855 - DENTAL TECHNICIAN

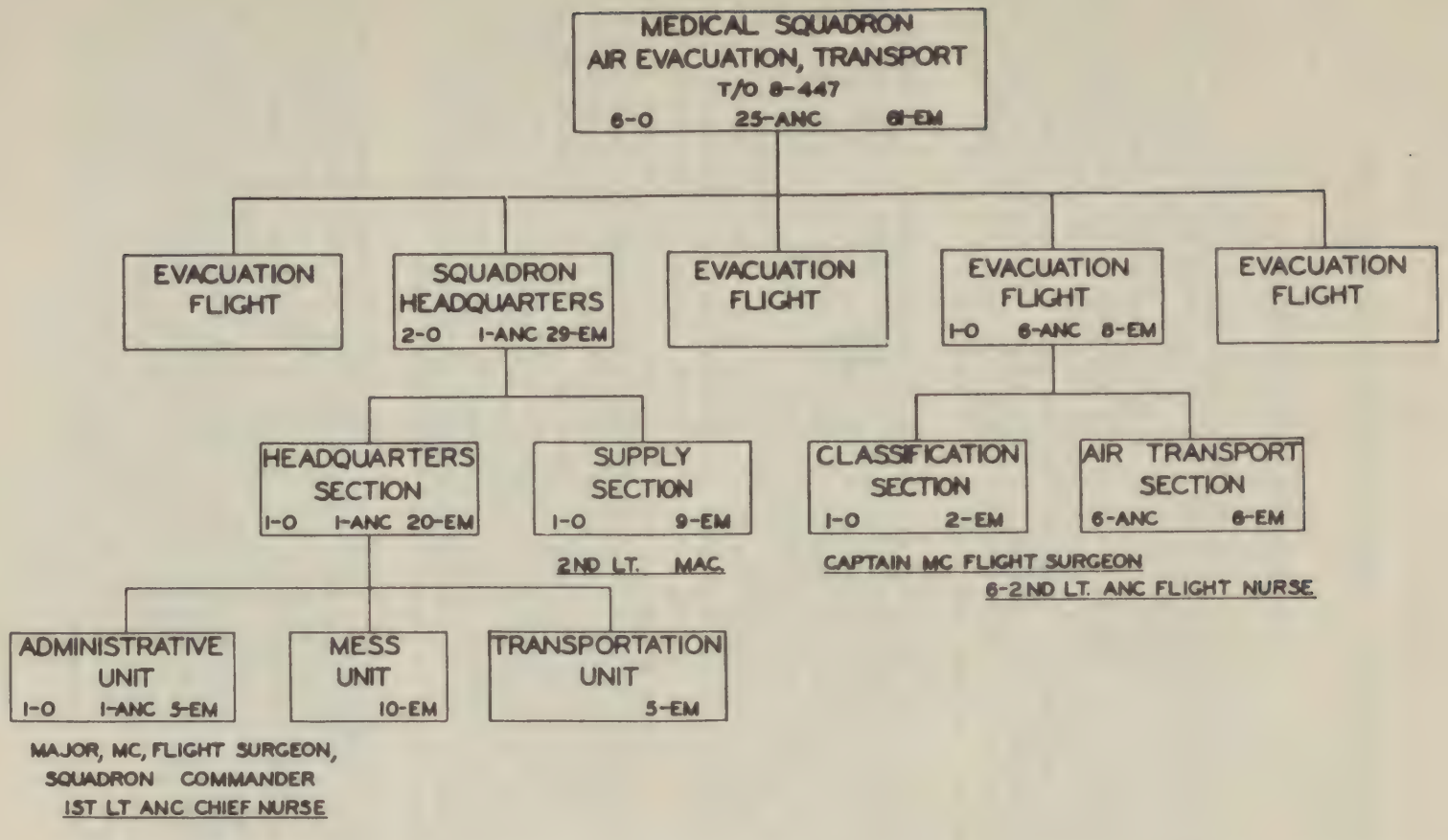
(II-T/SGT)(IV-SGT)
(V-CPL)(VII-PVT)

ARMY AIR FORCES
ORGANIZATION OF MEDICAL DISPENSARY, AVIATION
AS PER T/O NO 8-450, DATED, 27 OCTOBER 1943



LEGEND

(673) MEDICAL NCO	(699) AMBULANCE DRIVER	II= T/SGT
(502) ADMINISTRATIVE NCO	(060) COOK	III= T/3
(501) ADMINISTRATIVE CLERK	(521) COOK'S HELPER	IV= SGT OR T/4
(855) DENTAL TECHNICIAN	(857) FLIGHT SURGEON'S ASSISTANT	V = CPL OR T/5
(859) PHARMACY TECHNICIAN		VI= PFC
(196) SANITARY TECHINICIAN	(409) MEDICAL TECHNICIAN	VII= PVT
(264) X-RAY TECHNICIAN	(861) SURGICAL TECHNICIAN	



ORGANIZATION OF THE MEDICAL SQUADRON AIR EVACUATION TRANSPORT
T/O 8-447

AAF REGULATION)
NO. 20-11)

HEADQUARTERS, ARMY AIR FORCES
WASHINGTON, 25 MARCH 1944

ORGANIZATION

Functions and Responsibilities of Statistical Control Offices

(This Regulation supersedes AAF Regulation 20-11, 15 October 1942.)

I - PURPOSE AND JURISDICTION

1. Purpose of Statistical Control System. Statistical Control Units and Detachments have been established at the headquarters of the separate air forces, similar commands, and major subcommands in order to provide a standard system for collecting, processing, analyzing, and reporting or presenting to appropriate commanders and staff assistants in every command echelon current and accurate facts concerning personnel, aircraft, equipment, supplies, operations, training, housing, and other matters required by their own or higher headquarters. These organizations thus have a dual responsibility: they provide Headquarters, AAF with desired statistical information and they furnish the headquarters in which located with complete statistical services, including reporting, compilation, tabulation, analysis, and graphic presentation.

2. Designation. With the institution of exact manning and the disbandment of certain permanent party types of organizations, Statistical Control Units and Detachments will become Statistical Control components of the headquarters in which they are established without reference to current numerical designation, and will thereafter be designated as Statistical Control Offices, Statistical Control Divisions, Statistical Control Sections, or similar names; provided that in every case two words of the designation will be "Statistical Control" and the other word will be the same organizational designation as that used for comparable staff components of the headquarters concerned, such as, "Office," "Division," "Section," etc. Since the term "Office" is the preferred one, the designation "Statistical Control Office" is used hereafter in this Regulation to describe the former Statistical Control Unit or Detachments. A list of the headquarters in which are presently located Statistical Control Units and Detachments or their successor Statistical Control Offices is attached for reference (Appendix A). An air force or similar command not included in this list may apply to Headquarters, AAF for installation of the Statistical Control System in its headquarters and subordinate units. In the event of the constitution and activation of an air force or similar command in the future, a Statistical Control Office will be included in its headquarters and the appropriate components of the Statistical Control System will be included in its subordinate units.

3. Personnel Authorization. With the institution of exact manning, personnel allotments and authorizations of grades for civilian and military personnel of a Statistical Control Office will be included in the over-all allotments of personnel and authorizations of grades shown on manning tables for the air force or similar command. Personnel strength and grades of Statistical Control Offices will not be reduced below the strengths and grades contained in authorizations under which the Units and Detachments were formerely operating as individual organizations, unless prior approval is obtained from the Chief, Management Control, Headquarters, AAF. Strength allotments and grades may, however, be increased within the bulk allotment for the air force or similar command without prior approval if such action is necessary to permit the performance of additional functions required by the command, or if the workload of the Statistical Control Office is

such that it cannot be efficiently handled by personnel currently allotted. Where personnel allotments and authorizations of grades for civilian and military personnel of Statistical Control Offices in subcommands (formerly Detachments of a Statistical Control Unit) have in the past been allocated, with the approval of a parent Statistical Control Office, from a total allotment for Statistical Control operations in the major command, this arrangement will be continued.

4. Jurisdiction over Statistical Control Offices. Each Statistical Control Office is responsible to the commander of the air force or similar command, or his next in command, and is under the technical supervision of the Chief, Management Control, Headquarters, AAF. Since Statistical Control Offices serve the statistical needs of all staff offices of their headquarters and of Headquarters, AAF, they will not be placed under the jurisdiction of any other staff office except with the approval of the Chief, Management Control. Where Statistical Control Offices are located in headquarters of subcommands, it will be the responsibility of the Statistical Control Office in the major command headquarters to establish such processing procedures and policies as are necessary to establish uniform, accurate, and efficient operation of the AAF reporting system. Statistical Control Offices in subcommands (formerly Detachments of Statistical Control Units) will continue to operate in relation to the parent Statistical Control Office as at present. Statistical Control Offices will not be moved in whole or in part from the headquarters in which located, and no personnel of the Offices will be moved or reassigned without the prior approval of the Chief, Management Control.

5. Supply of Personnel and Equipment. It will be the responsibility of the command headquarters in which a Statistical Control Office is located to provide adequate and qualified military and civilian personnel, together with sufficient space, office and special equipment, special devices, and expendable supplies, needed for the efficient operation of the Office. Teletypewriter equipment and IBM equipment, consistent with requirements for operating the standard reporting system and supplying command needs, will be provided by the Chief, Management Control. It will be the responsibility of the Statistical Control Office to assure efficient utilization of such equipment within the command to which assigned.

6. Qualifications of Officer Personnel. Chiefs of Statistical Control Offices will be officers who are classified as Statistical Control Officers in accordance with provisions of AAF Reg 20-2, who have had a minimum of eight months' experience in the AAF as Statistical Control Officers, and whose military and civilian qualifications are otherwise appropriate and satisfactory to the command and to the Chief, Management Control. Other officer personnel will consist of those classified as Statistical Control Officers in accordance with provisions of AAF Reg 20-2, or, for assignment to machine records duties, qualified machine records officers.

7. Communications. On technical and routine statistical reporting matters only, Statistical Control Offices are authorized to communicate directly with similar offices in subcommands or with reporting organizations in the field and with the Statistical Control Division, Office of Management Control, Headquarters, AAF. The establishment of field liaison, including field trips, between reporting organizations and each Statistical Control Office is authorized for the purpose of improving the accuracy and timeliness of reports; providing standard interpretations of regulations and instructions; accomplishing the exchange of useful procedures and ideas between field organizations; and coordinating the activities of field Statistical Control Officers.

II - FUNCTIONS

8. Specific Functions and Duties. Each Statistical Control Office will perform or discharge the following functions and duties:

a. Supervise, control, and issue instructions concerning the preparation, collection, and forwarding of all reports required from organizations under other commands for whose reports the Office has been made responsible by Headquarters, AAF. This function is more fully described in AAF Memo 80-4.

b. Assume responsibility for the completeness and accuracy of all reports received and for adherence to reporting schedules by reporting organizations; take necessary corrective action when reports received are inadequate, incorrect, late, or otherwise unsatisfactory.

c. When necessary, distribute to reporting organizations for which responsible initial supply of blank forms for required reports.

d. Exercise technical supervision over the standard statistical reporting system and over Statistical Control Offices and Statistical Control Officers assigned to lower echelon units of the air force or similar command.

e. Assemble, process, analyze, and present all types of statistical data for the use of various staff sections and officers. Where so directed by command headquarters, maintain statistical charts and graphs in statistics, conference, situation, or war rooms.

f. Collect, process, audit, and transmit special reports required from time to time by Headquarters, AAF. Such reports will be in addition to those recurring reports covered by AAF regulations and directives.

g. Conduct continuing surveys of all statistical reports used within the command in order to make recommendations for the elimination or consolidation of obsolete, unnecessary, or duplicate reports; clear and coordinate command requests for statistical reports from lower echelons and exercise technical supervision over such report review, clearance, and coordination by Statistical Control Offices and Officers at lower echelons.

h. Anticipate the needs of command headquarters for statistical information and furnish such information as the needs arise.

9. All previous instructions or publications inconsistent with the foregoing are hereby recinded.

By command of General ARNOLD:

BARNEY M. GILES
Major General, United States Army
Chief of Air Staff

OFFICIAL:

THOMAS A. FITZPATRICK
Colonel, AGD
Air Adjutant General

DISTRIBUTION:
"A"

Attachment: Appendix A

APPENDIX A
to
AAF Reg 20-11

Headquarters in which Statistical Control Units, Detachments, or succeeding organizations in Continental United States are established:

Hq First Air Force, Mitchel Field, N. Y.

Hq Second Air Force, Colorado Springs, Colorado

Hq Third Air Force, National Guard Armory, Tampa, Fla.

Hq Fourth Air Force, 180 New Montgomery Street, San Francisco, California

Hq Central Flying Training Command, Randolph Field, Texas

Hq Eastern Flying Training Command, Maxwell Field, Montgomery, Alabama

Hq Western Flying Training Command, 1104 West 8th Street, Santa Ana, Calif.

Hq AAF Training Command, Texas & Pacific Building, Fort Worth, Texas

Office of Flying Safety, Nissen Building, Winston-Salem, N. C.

Hq Eastern Technical Training Command, Greensboro, N. C.

Hq Western Technical Training Command, 1108 - 15th Street, Denver, Colorado

Hq Air Service Command, Patterson Field, Fairfield, Ohio

Hq Sacramento ASC, McClellan Field, Sacramento, Calif.

Hq Spokane ASC, Main & Washington Sts., Spokane, Washington

Hq Ogden ASC, Hill Field, Ogden, Utah

Hq Oklahoma City ASC, Tinker Army Air Field, Oklahoma City, Okla.

Hq Rome ASC, Rome Army Air Field, Rome, N. Y.

Hq Middletown ASC, Olmsted Field, Middletown, Pa.

Hq Warner Robins ASC, Robins Field, Warner Robins, Ga.

Hq Mobile ASC, Brookley Field, Mobile, Ala.

Hq Fairfield ASC, Patterson Field, Fairfield, Ohio

Hq San Antonio ASC, Kelly Field, San Antonio, Texas

Hq San Bernardino ASC, San Bernardino Army Air Field, San Bernardino, Calif.

Hq Atlantic Overseas Air Service Command, Newark Army Air Field, Newark, N. J.

Hq Pacific Overseas Air Service Command, 32d & Cypress Sts., Oakland, Calif.

Hq Air Transport Command, Washington 25, D.C.

Hq Ferrying Division, ATC, Cincinnati, Ohio

Hq AAF I Troop Carrier Command, Stout Field, Indianapolis, Indiana

Hq AAF School of Applied Tactics, Orlando, Florida ✓

Hq AAF Redistribution Center, Atlantic City, N. J.

WAR DEPARTMENT

A. A. F. REGULATION) HEADQUARTERS ARMY AIR FORCES
No. 25-7) WASHINGTON, July 21, 1942

MEDICAL

Venereal Disease Control

1. Attention is directed to letter AG 320.2 (1-5-42) OP-A-M, February 6, 1942, Subject: Venereal Disease Control Officers.

2. A Venereal Disease Control Section has been established in the Professional Division, Officer of the Air Surgeon. It is the function of this section to assist in the procurement, training, and placement of personnel for venereal disease control activities; to plan, develop, and institute measures for the prevention of venereal disease; to assist local stations in the development, conduct, and evaluation of control measures; to maintain records necessary for the section, and to serve as a liaison agent in matters relative to venereal disease control between the Air Surgeon and the Surgeon General, the United States Public Health Service, the Federal Security Administration, and responsible civilian agencies.

3. "Venereal Disease Control Officers" (Letter AG 320.2 (1-5-42) OP-A-M, February 6, 1942) will be assigned to each training center of the Flying Training Command, to the Technical Training Command, to the various air forces, and to other commands where such officer may be necessary or desirable. In addition, Venereal Disease Control Officers will be assigned to individual stations as prescribed in par. 1, of the aforementioned letter, and to such other stations as may be necessary or advisable. The surgeons of those stations to which no prescribed Venereal Disease Control Officers have been assigned will designate an officer who, as part of his duties, will assume, under direction of the surgeon, the supervision of venereal disease control activities.

4. The Venereal Disease Control Officer will function as directed in pars. 2 and 3, letter AG 320.2 (1-5-42) OP-A-M, February 6, 1942. Cooperation will be maintained with the appropriate Corps Area Venereal Disease Control Officers, and with such agencies as referred to in SGO Circular Letter No. 50, May 28, 1941; letter AG 726.1 (7-15-41) MB-M, August 2, 1941, WD Circular No. 170, August 16, 1941; and letter AG 353.8 (9-13-41) MB-A-M, October 2, 1941.

5. Venereal Disease Control Officers will render reports in such manner as prescribed in Army Regulations and AAF publications. Special attention is invited to the letter of the Air Surgeon, May 23, 1942, Subject: Medical Activities, with revision in form as noted in W.D. Circular No. 166, par. IV, May 30, 1942.

6. From time to time such additional instructions as may be necessary for the guidance of Venereal Disease Control Officers will be issued.

By command of Lieutenant General ARNOLD:

GEORGE E. STRATEMEYER
Major General, U.S. Army
Chief of the Air Staff

OFFICIAL:

WILLIAM W. DICK,
Colonel, A.G.D.
Air Adjutant General

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"A"

A.A.F. REGULATION)
No. 25-8)

WAR DEPARTMENT
HEADQUARTERS ARMY AIR FORCES
WASHINGTON, July 27, 1942

MEDICAL

Gas Defense and Treatment Program of Air Force Establishments

1. In conformity with W.D. Training Circular No. 31, May 16, 1942, Subject: "Chemical Defense of Air Force Establishments," a program to include the following will be instigated by commanding officers of all AAF stations, posts, camps, and bases:

a. A gas casualty officer will be designated from Medical Department personnel, who will be responsible for the initiation of a Gas Defense and Treatment Program insofar as the Medical Department is concerned.

b. Medical equipment and installations will be provided in the decontamination center and sick annex for men and women.

c. The responsibility for various phases of decontamination and treatment of gas casualties between the Medical Department, the Quartermaster Corps, the Chemical Warfare Service and the Army Air Forces will be determined by the commanding officer. Subject to modifications as required by local conditions, specific responsibilities will be as follows:

(1) Removal and disposal of contaminated clothing and individual equipment will be performed by personnel of the Army Air Forces under direction of the gas officer.

(2) Actual decontamination of contaminated clothing and individual equipment will be as directed by the base commander.

(3) Furnishing field bathing facilities will be the responsibility of the base quartermaster.

(4) Supervision of actual bathing of contaminated personnel will be the responsibility of the Medical Department.

(5) Treatment of contaminated personnel will be the responsibility of the Medical Department.

(6) New clothing to replace contaminated clothing will be furnished by the base quartermaster.

d. Measures will be taken to provide adequate protection against incendiaries in all station hospitals.

e. A medical plan will be prepared for the medical protection, evacuation, treatment, and decontamination of all personnel and facilities which may be subject to chemical attack. The contents of the gas casualty chest, which is not authorized for station hospitals, will be used as a guide in requisitioning supplies in connection with the medical plan.

2. Attention is invited to FM 21-10 and TM 8-285, as text references for the treatment of gas casualties.

By command of Lieutenant General ARNOLD:

GEORGE E. STRATEMEYER
Major General, U.S. Army
Chief of the Air Staff

OFFICIAL:

WILLIAM W. DICK,
Colonel, A.G.D.
Air Adjutant General,

DISTRIBUTION:
"A"

A.A.F. REGULATION)
No. 25-8A)
25-8B)

WAR DEPARTMENT
HEADQUARTERS ARMY AIR FORCES
WASHINGTON, March 31, 1943

MEDICAL

Medical Training in Defense Against Chemicals and Treatment of Chemical Casualties

AAF Regulation No. 25-8, July 28, 1942, is supplemented as follows:

1. RESPONSIBILTY. Commanding officers are responsible for the conduct of medical training in defense against chemicals and treatment of chemical casualties. Surgeons will advise commanding officers, who plan and supervise programs for this training. Surgeons will advise commanding officers as to medical training requirements and, under the general supervision of the commanding officers, will plan and supervise programs for this training. Surgeons are responsible for the direction and control of personnel decontamination and first-aid stations. (Par. 18, Sec. 1, WD TC No. 31, May 16, 1942.)

2. IMPORTANCE OF TRAINING. The classification of many Army Air Forces installations in regard to probability of chemical attack has recently been raised to Class 1. More Army Air Forces units are arriving each day in the theatre of operations. Surprise is an important factor in the success of a chemical attack. By maintaining a higher level in gas training we can reduce the probability of an all-out use of gas, even though its use might be indicated as a last desperate attempt to turn the tide in a losing war. The tempo of medical training in defense against chemicals and the treatment of chemical casualties must be accelerated to meet this increasing threat of chemical warfare.

3. MEDICAL TRAINING OBJECTIVES. All Army Air Forces personnel must have sufficient medical knowledge and training to perform personnel decontamination, first aid, and treatment of chemical injury commensurate with their individual responsibility, This training will be included in regular training programs or given as a special course of instruction. Medical training standards for all personnel of the Army Air Forces are being published in a series of Army Air Forces Training Standards. These training standards will be used in the preparation of training schedules. There must be close coordination between the surgeon and the chemical warfare officer in all medical training programs in defense against chemicals and treatment of chemical casualties.

4. SPECIAL EQUIPMENT. Gas Casualty Set, Complete, Medical Supply Catalog No. 97757, contents of which are found in the current medical supply catalog. This set is part of the aid station equipment assigned to the medical section of each tactical AAF unit and is especially designed for the treatment of gas casualties.

5. SPECIAL INSTALLATIONS. The surgeon must be familiar with the construction and operation of the personnel decontamination station and the gas first-aid station. These installations are splinter-proof and gas-proof. Drawing NO. 46A-1-19, "Decontamination Center for Wounded and Unwounded Men and Women," and Drawing No. 46A-1-20, "Sick Annex for Men and Women," prepared by the office of the Chief of Engineers, are recommended for construction purposes.

6. INSPECTION. Frequent periodic inspections of medical training in defense against chemicals and the treatment of chemical casualties will be made in order to insure that the status of medical training is kept up to prescribed standards.

7. REFERENCES. WD TC 31; FM 3-25, FM 21-40; TM 3-205, TM 3-215, TM 3-220, TM 3-250, TM 3-300, TM 3-305, TM 3-315, TM 3-330, TM 8-285, TF 3-10, TF 3-216, TF 3-217, TF 3-218, TF 3-219, TF 3-591, TF 3-650; FS 3-1, FS 3-2, FS 3-3, FS 3-4, FS 3-5, FS 3-6, FS 3-7,

FS 3-8, FS 3-9, FS 3-11, FS 3-14.

By command of Lieutenant General ARNOLD:

GEORGE E. STRATEMEYER
Major General, U.S. Army
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"A"

AAF REGULATION)
No. 55-7)
55-7A)

HEADQUARTERS, ARMY AIR FORCES
WASHINGTON, 4 March 1944

OPERATIONS

Personal Equipment Officer

(This Regulation supersedes AAF Regulation 55-7, 4 May 1943.)

1. **PURPOSE.** In order to insure the greatest safety and efficiency for flying personnel through the proper use of personal equipment and emergency equipment, particularly oxygen equipment, individual flying clothing and equipment, parachutes, aircraft fire extinguishers, and air/sea rescue equipment, and to coordinate air/sea rescue, an officer designated as the Personal Equipment Officer is assigned to each activated and constituted organization engaged in flying.

2. **DUTIES.** It will be the primary duty of the Personal Equipment Officer to supervise the maintenance of, and to instruct in the proper use of, emergency equipment, individual flying equipment, oxygen equipment, air/sea rescue equipment, and other related items. In addition, he will be responsible for the coordination of air/sea rescue activities. The Personal Equipment Officer will be a non-flying officer. Only in exceptional circumstances will additional duties, other than those prescribed, be assigned to a Personal Equipment Officer. Detailed duties are outlined below:

a. Squadron and group Personal Equipment Officers will carry out the following duties with regard to:

(1) Oxygen and oxygen equipment:

(a) Familiarize themselves with all service oxygen equipment, and instruct all personnel who may be required to participate in aerial flight in the proper use and maintenance thereof.

(b) Fit oxygen masks to personnel required to participate in aerial flight, according to existing Technical Orders. Each fit is to be checked at frequent intervals.

(c) Insure that all flying personnel are familiar with the location of oxygen outlets and "walk-around" bottles.

(d) Make frequent inspections of oxygen equipment and installations and supervise tests of oxygen regulators, check valves, masks, "walk-around" bottles, "bail-

out" bottles, oxygen supply tanks, all tubing, valves, instruments, indicators, hose and washers, and related equipment. All malfunctioning or unsatisfactory oxygen equipment or unsatisfactory maintenance systems will be reported promptly by the Personal Equipment Officer as provided for in AAF Regulation 15-54.

(e) Insure the availability of adequate supplies of oxygen equipment in the organization supply section.

(f) Cooperate with organization engineering officers to insure proper installation, maintenance, and servicing of all oxygen equipment.

(g) Insure that all oxygen equipment is checked periodically and supervise the inspection of all oxygen systems at each 100-hour aircraft check.

(h) Maintain a constant knowledge of changes in all oxygen equipment technical orders and inform all flying and maintenance personnel of such changes.

(i) Train flying and maintenance personnel in the proper maintenance of oxygen equipment.

(j) Instruct, in cooperation with the flight surgeon, all flying personnel in the proper use of oxygen and oxygen equipment.

(k) Perform a thorough pre-flight check of all oxygen equipment prior to take-off on operational missions.

(l) Insure efficient and rapid oxygen servicing.

(2) Individual Flying Equipment:

(a) Supervise thorough and periodic drill of all flying personnel and parachute maintenance personnel in the proper care, maintenance, and use of parachutes.

(b) Insure that parachutes are periodically and properly inspected and that adequate records of such inspections are kept by the Engineering Section.

(c) Insure that all flying personnel are trained in the use of various types of flying clothing, including life vests, and in the proper care and maintenance thereof.

(d) Insure that all items of flying clothing are properly cared for after each flight.

(e) See that flying personnel have the proper equipment insofar as it is available for issue, and that all personel flying equipment fits properly.

(3) Fire Extinguishers:

(a) Supervises the training of all group and squadron personnel in the use of fire extinguishers in aircraft.

(b) Supervise the maintenance and inspection of all fire extinguishers to assure proper charging, placement, and security in aircraft.

(4) Air/Sea Rescue Equipment and Procedure:

(a) Instruct flying personnel in ditching procedures including the handling of life rafts, dinghies, aircraft water landing characteristics, proper positions for ditching, radio procedures before ditching and emergency procedure thereafter, the use of pyrotechnic equipment, and all other emergency equipment.

(b) Supervise the ground crews in the approved stowage of life rafts in aircraft.

(c) Inspect all aircraft to ascertain that life rafts are equipped with proper accessories and are serviceable, and that individual dinghies, when carried, are in serviceable condition.

(d) Inspect all emergency and personal equipment in all aircraft involved in any accident or those that have sustained any battle damage.

(e) Conduct drills for all personnel to familiarize them with the location of escape hatches and proper escape hatch technique. Insure that all crew members know the location of all escape hatches, the methods of opening them, and which one is assigned to each man.

(f) Inspect and supervise the maintenance of escape hatches by the Engi-

neering Section.

(g) Conduct frequent drills in crash landing, ditching, and dinghy procedures for all crew members.

(5) Miscellaneous:

(a) Instruct and supervise ground crews in the storage and maintenance of all emergency and personal equipment in aircraft, such as oxygen masks, "walk-around" bottles, parachutes, life rafts, life vests, individual dinghies, first-aid kits, fire extinguishers, emergency radio, emergency raft, and water and all other life-saving emergency equuipment.

(b) Inspect all kits, first-aid, aeronautic, emergency sustenance kits, and other emergency and first-aid kits assigned to aircraft, and insure that such equipment is complete.

(c) Insure that the pilot and radio operator are versed in distress procedures to be followed prior to actual ditching, and that all members of the aircrew are familiar with the general principles.

(d) Arrange, in cooperation with the flight control officer, and make available, with the least possible delay, accurate information as to search action taken for organizational aircraft forced down at sea.

(6) Reports:

(a) A letter report will beprepared by theorganizational Personal Equipment Officer and flight surgeon of each accident or death to flying personnel caused in whole or in part by malfunctioning of oxygen equipment, lack of oxygen equipment, inadequate knowledge of the use of oxygen equipment, or by malfunctioning or lack of any emergency or rescue equipment. This report will be forwarded in triplicate by the flight surgeon directly to Headquarters, Army Air Forces, Washington, 25, D. C., Attention: The Air Surgeon within five (5) days subsequent to the date of the accident or death.

(b) Initiate reports onmalfunctioning of allequipment coming under their jurisdiction and make recommendations for correction.

b. Wing Personal Equipment Officers (Air Division) will:

(1) Supervise and coordinate the activities of group and squadron Personal Equipment Officers.

(2) Carry out routine visits of inspection to each organization in the wing.

(3) Check training records to insure that instruction in the use of the various types of emergency and personal equipment is being given to operational crews and maintenance personnel.

(4) Insure that allorganizations within the wing arefully informed as to the latest developments in equipment and procedure.

(5) Inform higher authority of all defects and of all changes, failures or complaints pertaining to emergency equipment.

(6) Interrogate all personnel concerned, after asuccessful rescue operation, and forward such information to the proper authority.

(7) Insure that complete information as to any search action taken is passed on to other organizations concerned.

c. The Command Personal Equipment Officer will:

(1) Supervise and coordinate theactivities of all Personal Equipment Officers within the command.

(2) Arrange for the proper training of organizational Personal Equipment Officers within the command.

(3) Make such visits of inspection as may be necessary and submit pertinent recommendations to proper authority.

(4) Maintain a record of efficiency in the use of emergency equipment of the various organizations under his supervision.

(5) Insure that all organizations are fully informed concerning the latest developments in emergency procedures.

(6) Supervise and coordinate all air/sea rescue activities within the command.

(7) Make recommendations through channels (to higher headquarters) for any changes or improvement in equipment or emergency procedure.

d. The Air Force Personal Equipment Officer will:

(1) Supervise and coordinate the activities of all Personal Equipment Officers within the air force.

(2) Make recommendations to the proper authority for issuance or revision of equipment and emergency procedure training directives, based upon recommendations from lower echelons of command.

(3) Issue appropriate information for proper ditching procedures and use of emergency rescue equipment for new type aircraft, and modifications of aircraft already in use.

(4) Maintain close liaison will all other agencies, foreign and domestic, responsible for air/sea rescue.

(5) Make such visits of inspections as may be necessary.

3. **TECHNICAL ASSISTANCE.** The flight surgeon of each organization will cooperate with the Personal Equipment Officer and render technical and professional advice.

4. The Assistant Chief of Air Staff, Operations, Commitments, and Requirements is responsible for the over-all supervision of the Personal Equipment Officer's program. He will be responsible for coordination of all Personal Equipment Officer activities and information.

5. In order to provide for a rapid exchange of pertinent information from Personal Equipment Officers in various AAF organizations, it is requested that all such information be forwarded to the Commanding General, Headquarters, AAF, Washington, 25, D.C. This material and information will then be disseminated as rapidly as possible to all AAF organizations.

By command of General ARNOLD:

BARNEY M. GILES
Major General, USA
Chief of Air Staff

OFFICIAL:

THOMAS A. FITZPATRICK
Colonel, AGD
Air Adjutant General

TASK FORCE SERVICE REQUIREMENTS

Service requirements for task forces will vary considerably in different theatres. The requirements set forth herein are considered average. Special consideration and planning must be applied to any particular theatre to accomplish any additions or reductions dictated by the character of the Theatre.

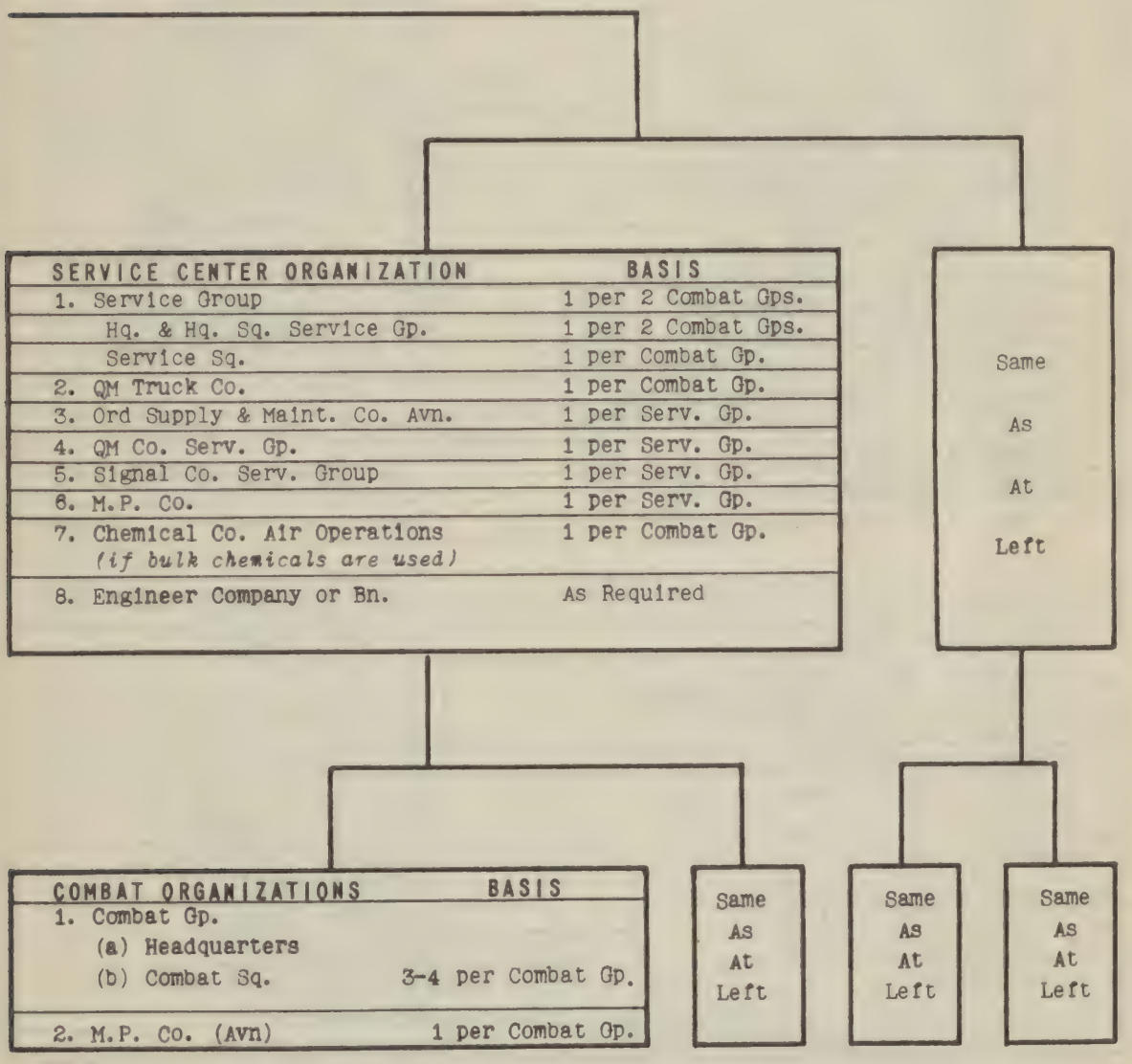

FIGURE I

(Attachment to AAF Reg. No. 65-1)

For instructional purposes only

DEPOT ORGANIZATIONS	BASIS
1. Air Force General Depot	
a. Air Depot Group	1 Per 4 Combat Groups
(1) Hq. & Hq. Sq. Air Dep. Gp.	1 Per Air Force Gen. Dep.
(2) Depot Repair Sq.	1 Per 4 Combat Gps.
(3) Depot Supply Sq.	1 Per 4 Combat Gps.
b. QM Co. Truck (AVN)	1 Per 4 Combat Gps.
c. QM Plat. Air Depot Gp.	1 Per 4 Combat Gps.
d. Ord. Co. Depot, Avn.	1 Per A F
e. Guard Squadron	1 Per Air Depot Group
f. Transport Sq.	1 Per Air Depot Group
g. Signal Co. Depot Avn.	1 Per Air Depot Group
h. Ordnance Maint. Co. (AF)	1 Per A F Gen. Dep.
i. Chemical Maint. Co. (Avn)	1 Per A F
j. QM Salvage Collecting Co.	1 Per A F
k. QM Co. Salvage & Repair	1 Per 50,000 Men
l. Medical Supply Platoon Avn.	1 Per Air Depot Group
2. a. Ordnance Ammunition Co.	1 Per Ord. Class V Depot
b. Chemical Dep. Co. (Avn)	1 Per Chem. Class V Depot
c.*QM Co. Depot Subs Avn.	1 Per QM Class I Depot
d.*QM Co. Class III Dep. Avn.	1 Per QM Class III Depot
e.*Engr. Avn. Depot Co.	1 Per C of E Class IV Depot
f.*Camouflage Dep. Sec. Engr. AF HQ Co.	
OTHER SERVICE COMMAND ORGANIZATIONS	
1. Hq. & Hq. Sq. Service Command (TF)	1 Per A F
2. Engr. Air Force Hq. Co.	1 Per A F
3. Engr. Camouflage Bn.	1 Per Major Theater
4. Engr. Avn. Topo. Co.	1 Per A F Per Photo Gp. if more than 1 to the A F 1 for sep. Mission.
5. Engr. Avn. Bn.	1 Per 2 Combat Gps.
6. Engr. Avn. Regmt.	1 Per Major Theater
7. Airborne Engr. Avn. Bn.	1 Per Air Force
8. Avn. Sq. (Sep) or QM Co, Service	1 Per Major Theater
9. Signal Bn. Constr.	2 Per A F
10.*Chem. Processing Co. (T of Opns)	1 Per 50,000 Men
11.*QM Co. Laundry (Semi-Mobile)	1 Sect. for Per 6,000 Men 1 Co. Per 40,000 Men
12.*QM Co. Bakery	1 Plat. Per 1000 Men 1 Co. Per 40,000 Men
13.*QM Co. Sterilization	1 Per Major Theater
14.*QM Co. Refrigeration	1 Per 10,000 Men
15.*QM Co. Sales	1 Sect. Per 10,000 Men 1 Co. Per 120,000 Men
16.*QM Co. Graves Registration	1 Per Major Theater

*Not provided if ground force facilities are available and suitably located.

FIGURE II

(Attachment to AAF Reg. 65-1)

For Instructional purposes only

A.A.F. REGULATION)
NO. 65-1)

WAR DEPARTMENT
HEADQUARTERS ARMY AIR FORCES
WASHINGTON, AUGUST 14, 1942

SUPPLY AND MAINTENANCE

Supply and Maintenance of Army Air Force Units

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Section I General

1. Purpose: The purpose of this Regulation is to prescribe the organization, procedure, and policy to be followed in the supply and maintenance of air force combat units, both in the field and at permanent bases either within or beyond the continental limits. A uniform plan is essential to accomplish the required training and organization of service units as well as to permit staff planning of air operations. It is recognized that in some theaters, due to local conditions, air force commanders will find it advisable to make some deviations from the plan prescribed in order to obtain best results. This is a command function.

2. Continental U.S. vs Task Force: Due to differences in service functions required of task forces as against operations within the continental limits, it is necessary to establish two plans. Within the continental limits, service functions are increased to include the activation, organization, training, and equipping of service units to make up task forces. Due to the fixed situation, more extensive permanent construction will be undertaken, and more elaborate facilities for supply and maintenance established. Within the continental limits, zone of the interior procurement and supply agencies must be provided to secure and ship materiel to all task forces as well as all air forces and training activities therein. For this reason, responsibility for most service functions at home rests with a command separate from the air forces, namely the Air Service Command. In an air task force, service functions revert to control of the air force commander. The plan for a task force is set forth in section II and for the Zone of the Interior operations in section III of this regulation.

3. Activation and Training of Service Units: It is the responsibility of the Commanding General, Air Service Command, to provide properly trained and equipped service units described in this Regulation for task forces and Zone of the Interior requirements. This responsibility is applicable only to the extent that jurisdiction and control of these units has been assigned to the Air Service Command.

The Commanding General, Air Service Command, will be advised of task force requirements by this headquarters; and by coordination with the commanding generals of air forces and commands in the Zone of the Interior, he will be advised of their service requirements. Commanding generals of air forces in the United States will be responsible for keeping the Commanding General, Air Service Command, advised of their training and tactical plans sufficiently in advance to enable him to plan and provide service requirements.

The Commanding General, Air Service Command, will then be responsible for plans for provision of the necessary trained service units in accordance with policies set down by this headquarters. Requests for activation of new units as required will be submitted to this headquarters.

4. Tables of Organization and Tables of Basic Allowances: This headquarters will prepare in final form and approve the Tables of Organization for all service units and all Tables of Basic Allowances. Recommendations pertaining to Tables of Organization and Tables of Basic Allowances will be submitted to this headquarters by the commanding generals, Air Service Command, air forces, and commands concerned, as the need arises.

5. Definitions:

a. Logistics: Matters pertaining to the transportation, supply, maintenance, and quartering of troops.

b. Supply Point: A general term used to include depots, subdepots, air bases, service centers, railheads, refilling points, distributing points and dumps.

c. Service Center: An intermediate supply point between the air force depots and dispersed squadron airdromes, controlling the flow of supplies, of all classes, forward to squadrons. It is the field substitute for the permanent base in the continental United States. It is manned by a service group and allied service organizations. The service center provides 3d echelon maintenance service.

d. Railhead: That point at which supplies moved forward by rail are transferred to trucks, tankers, etc.

e. Refilling Point: Supply points operated by the service center at which supplies are broken down for shipment to the squadron airdromes.

f. Distributing Point: Supply point at the squadron airdrome to which supplies are delivered by the service center and from which the supplies are distributed to using personnel by the squadron.

g. Classification of Supplies:

(1) Class I - Supplies which are consumed at an approximately uniform daily rate irrespective of combat operations, such as: rations, fuel, and articles of a similar nature.

(2) Class II - Individual and organizational equipment prescribed by Tables of Basic Allowances, except aircraft and motor vehicles.

(3) Class III - Motor transport fuels and lubricants.

(4) Class III (A) - Aviation fuels and lubricants.

(5) Class IV - Supplies and equipment for which allowances are not prescribed or which require special measures of control and are not otherwise classified, such as camouflage materials, construction materials, motor vehicles, medical supplies, and articles of a similar nature.

(6) Class IV(E) - Complete airplanes, airplane equipment, and all spare parts, and supplies required to maintain the complete airplane in commission.

(7) Class V - Ammunition, including bombs, pyrotechnics, and C. W. S. chemicals.

NOTE: Articles of supplies of Class I and II may, by reason of special stringency and the consequent necessity for exercising closer command control be transferred to Class IV pending the establishment of a normal status of supply.

h. Echelons of Aircraft Maintenance:

(1) 1st Echelon: That maintenance performed by the air echelon of the combat unit.

(2) 2d Echelon: That maintenance performed by the ground echelon of the combat unit, air base squadrons, and airways detachments.

(3) 3d Echelon: That maintenance performed by service groups and subdepots.

(4) 4th Echelon: That maintenance performed by air depot groups and air depots.

It is impossible to establish any formula defining just what maintenance and repair operations constitute 1st, 2d, 3d, or 4th echelon, nor is it necessary or advisable. Each echelon is primarily limited by the specialists provided in its Table of Basic Allowances. To a very large extent it is limited by the initiative, ability, and aggressiveness of the personnel of the organization concerned. In war time each organization, in the interest of efficiency, does every-

thing it possibly can and passes on up to the higher echelon only that which is necessary. In this way accumulation at a higher echelon of work that could have been done in a lower echelon is avoided. The specialists and equipment of the higher echelon can then be concentrated on the work they of necessity must perform. The echelon in some cases may be determined by the length of time required to repair an airplane. Where considerable time is required it may be inadvisable to keep the airplane and repair crew at a forward vulnerable airdrome.

First echelon maintenance will normally consist of servicing airplanes and airplane equipment, preflight and daily inspections, and minor repairs, adjustments, and replacements. All essential tools and equipment must be transportable by air.

Second echelon maintenance will normally consist of servicing airplanes and airplane equipment, performance of the periodic preventative inspections and such adjustments, repairs, and replacements as may be accomplished by the use of hand tools and mobile equipment authorized by Tables of Basic Allowances for issue to the combat unit. This includes engine change when the organization concerned is at the location where the change is required. Most of the tools and equipment for 2d echelon can be transported by air; but certain items, such as transportation, radio, etc., necessitate ground means of transportation.

Third echelon of maintenance embraces repairs and replacements requiring mobile machinery and other equipment of such weight and bulk that ground means of transpprt is necessary. Units charged with this echelon of maintenance require specialized mechanics. This echelon includes field repairs and salvage, removal and replacement of major unit assemblies, fabrication of minor parts and minor repairs to aircraft structures and equipment. Normally, this echelon embraces repairs which can be completed within a limited time period, this period to be determined by the situation prevailing.

Fourth echelon of maintenance includes all operations necessary to completely restore worn or damaged aircraft to a condition of tactical serviceability and the periodic major overhaul of engines, unit assemblies, accessories, and auxiliary equipment; the fabrication of such parts as may be required in an emergency or as directed in technical instructions; the accomplishment of technical compliance changes as directed; replacement, repair, and service checking of auxiliary equipment; and the recovery, reclamation, or repair and return to service of aircraft incapable of flight.

i. Echelons of Air Force Technical Supply:

(1) 1st Echelon: Supply facilities of the air echelon of the combat squadron. This consists of a 3-day supply level carried in the crew chief kit and is transportable by air.

(2) 2d Echelon: Supply facilities of the ground echelon of the tactical squadron. This consists of a 10-day supply level provided in the Squadron Engineering Set, T.O. 00-30-19.

(3) 3d Echelon: Supply facilities of the service group or subdepot. In the case of the service group, this consists of a 30-day supply level.

(4) 4th Echelon: Supply facilities of the Zone of the Interior air depots and air force air depot groups. In the case of the air depot group this will normally consist of a 90-to-150-day supply level.

The above supply levels will, of course, vary with the particular situation depending upon distances involved, availability of supplies, and whether situation is static or mobile.

j. Echelons of Maintenance, Allied Services.

Echelons of maintenance of allied service units of the air force conform to echelons of aircraft repair, i.e.:

(1) 1st Echelon: Maintenance performed by equipment operators.

(2) 2d Echelon: Maintenance performed by the using organization.

(3) 3d Echelon: Maintenance performed by service center organizations.

(4) 4th Echelon: Maintenance performed by depot organizations.

k. Echelons of Reclamation:

(1) First Echelon: First echelon reclamation is a function of the air echelon of the combat squadron. It is limited to the turning over of damaged, unserviceable, or excess equipment on hand to the 2d echelon.

(2) Second Echelon: Second echelon reclamation is a function of the ground echelon of all air force units operating or maintaining airplanes. It is limited to the assembly for transport of damaged, unserviceable, or excess equipment on hand, and notification of the 3d echelon as to the type, amount, and location of such materiel.

(3) Third Echelon: Third echelon reclamation is a function of subdepots or service groups. It embraces the collection from DP's of damaged, unserviceable or excess equipment and the determination as to the most economical disposition of damaged or unserviceable equipment. Excess but serviceable equipment is returned to stock.

(4) Fourth Echelon: Fourth echelon reclamation is a depot function. It embraces the final disposition, i.e., disassembly, repair, and return to stock of component parts, salvage or destruction of materiel worn or damaged beyond use or economical repair.

Section II - Task Force Organization

General:

a. The Air Force Service Command: The air force commander's staff includes a service commander. In very large theaters, service area commanders subordinate to the service commander may be necessary. Under the service commander's direct control are all air force service organizations and installations. These organizations and installations include service command headquarters; air force air, quartermaster, ordnance, signal, chemical, medical, and engineer depots and service centers. Where ground force communications zone or S.O.S. depots, supplying materiel common to both ground and air forces, are suitably located to serve the air force and are so used, no corresponding air force depot will be established. One or more air force depots for each branch may be established depending on the number of combat groups, communications facilities, area occupied and necessity for dispersion.

Service command functions will comprise such activities as repair, supply, evacuation, sanitation, construction, transportation, traffic control, salvage, graves registration, burials, quartering, training of service units, estimation and supervision of funds, and such other services as may be required.

Figure I illustrates the organization described. Figure II presents schematically the flow of supplies within this organization. Figure III shows the organizations comprising the service installations.

b. Hospitalization:

All hospitalization in the theater of operations is the responsibility of the theater commander. The S.O.S. will furnish the required facilities. Air force commanders will request the required hospital facilities from the theater commander. Dispensaries only will be operated by air force organizations in the theater of operations with medical personnel included in their Tables of Organization.

c. Evacuation:

(1) All evacuations except air evacuation in the theater of operations is the responsibility of the theater commander. The theater commander will furnish necessary evacuation units for air force units. The S.O.S. furnishes all required evacuation facilities to the theater commander. The air force surgeon, in coordination with the theater surgeon, will coordinate evacuation by ground installations of casualties occurring in the air force units. This will be done by simply tying into the ground evacuation system which is functioning in the area in which the airdrome is situated. If no such facilities exist, separate air force facilities must be provided.

(2) Air Evacuation: Air evacuation of air force and other personnel will be by air force facilities. It is not anticipated that large scale evacuation will be required from air force installations.

d. Replacements:

(1) The procurement and individual training of personnel replacements for an air force is a function of the zone of the interior. However, the air force commander is materially concerned, and must make representation as to his requirements. Personnel replacements include all personnel destined to replace losses or to bring any unit up to its prescribed strength.

(2) The air force commander will therefore operate a personnel replacement depot. At this point replacements for all air force components are maintained at the level prescribed by the theater commander. Here, personnel are given final training before assignment to combat units. Included, should be the required number of trained airplane combat crews immediately available to replace losses and maintain combat units at full strength.

(3) Replacements are forwarded upon requisitions routed through prescribed channels. In situations where the supply of replacements available does not meet requirements or when otherwise desirable, credits may be established for subordinate units. Credits may also be established for the air force in zone of the interior replacement depots upon request of the commander of the theater of operations.

(4) Normally the relacement depot is a relay point for aircraft replacements. Air craft being forwarded from communications or zone of the interior depots to the requiring units are delivered at this point by communications zone or zone of the interior ferry pilots. For movement forward from this point the replacement depot provides either a ferry crew or a complete combat crew as called for by the requisition.

e. Allied Service Units: The strength and composition of service troops required by an air force will depend upon many factors, including:

(1) The strength and composition of the air force in combat units.

(2) The location of the theater and nature of the terrain.

(3) Supplies available locally within the theater.

(4) The number of airdromes required, the number and condition of those available, and distances between airdromes and depots.

(5) The availability of ground force supply points and service units to components of the air force.

(6) The extent and condition of the existing rail, road, and wire communications net.

(7) The probable nature of the operations.

However, in order to permit necessary planning, the composition of a typical air force service command is included.

2. Organization of Service Command Headquarters: The headquarters of the service command is operated by the headquarters and headquarters squadron, Air Service Command (task force) T/O tentative. The service commander has a general and a special staff for the purpose of supervising and coordinating all service activities. The general staff consists of an S-1, S-2, S-3, and S-4. The special staff consists of Quartermaster, Ordnance, Signal, Engineer, Chemical Warfare, Medical, and Finance staff officers.

3. Air Force Depot Organization:

a. General: In view of the large number of individual items required by air force units, a centrally located air force general depot, or depots, must be established to serve the air force. The equivalent ground force installation is the army general depot. This air force general depot will include air, signal, and ordnance class II and IV sections. If ground force establishments are not used, quartermaster class II and IV; quartermaster motor transport, engineer class II and IV, medical and chemical class II and IV sections will be established.

Other air force depots will include the air force aviation gasoline and oil depot, air force ordnance ammunition depot and air force chemical ammunition depot. When ground force establishments are not used, air force quartermaster, class I, air force quartermaster, class III and air force engineer, class IV (camouflage and construction materials) depots will be established.

One or more depots of each type may be established depending on the size and disposition of the air force and the character of the theater.

Ground force depots will be used in lieu of air force engineer and quartermaster depots and sections if available and suitably located.

Tables of organization have been approved and organizations will be activated, equipped, and trained as required for air force depots. These organizations and their general functions are described below.

b. Air Force General Depot:

(1) Air Section: This section is operated by one or more air depot groups, depending on the number of combat units served. Normally one depot group per four combat groups will be provided. This group provides the 4th echelon of air force maintenance and supply for the air force.

(a) The Army Air Forces Headquarters and headquarters, squadron air depot group, T/O 1-852, provides the headquarters for the general depot, the depot operations and flight section, a transportation section for the organic transportation pool, and a photographic section. It also includes medical, chemical, ordnance, and finance sections to provide corresponding services for the general depot itself.

(b) The Army Air Forces depot repair squadron, T/O 1-857, provides the personnel for the 4th echelon repair and overhaul of aircraft, aircraft engines, unit assemblies, accessories and auxiliary equipment. It also has machine equipment with limited capacity for the fabrication of parts to augment the supply system, insofar as possible, in emergency.

(c) The Army Air Forces depot supply squadron, T/O 1-858, provides the personnel for the 4th echelon procurement, storage, and issue of air force technical supplies and equipment.

(2) Ordnance Section:

(a) The ordnance, class II and IV section, will be operated by the Ordnance Company Depot, Aviation, T/O 9-18. Its function is to store and issue ordnance, class II and IV supplies. Normally, only one unit will be provided per general depot.

(b) The Ordnance Company, Medium Maintenance, T/O 9-7, will perform the 4th echelon of ordnance maintenance for all ordnance equipment used by the air force. Normally, only one unit will be provided per general depot.

(3) Signal Section: The signal section is operated by the Signal Company Depot, Aviation, T/O 11-287. This unit is provided on the basis of one company per three air depot groups. The functions of this signal section are the storage and issue of all air force signal supplies and equipment and the 4th echelon repair of Signal Corps equipment used by the air force. This repair will be accomplished at the depot or by mobile repair units in the field.

(4) Sections to be Provided if Ground Establishments Not Available: The following sections will be established if ground force supply installations are not available or are not suitably located:

(a) Quartermaster Class II and IV Section: This section is operated by the quartermaster platoon, air depot group, T/O tentative. Its functions are the storage and issue, in bulk, of class II and IV supplies. This platoon also supplies the troops in the local area.

(b) Quartermaster Motor Transport Section: This section is operated by the Quartermaster Company, Motor Transport Depot, Aviation, T/O 10-48. Its functions are the storage and issue in bulk of all motor transport supplies required for air force units in connection with the 1st, 2d, and 3d echelons of motor transport maintenance.

(c) Engineer Class II and IV Section: The storage and issue of engineer class II and IV supplies, except camouflage and construction materials, will be handled by the supply squadron, air depot group.

(d) Chemical Class II and IV Section: The chemical section of the headquarters and headquarters squadron, air depot group, will store and issue class II and IV, chemical supplies, including decontaminating materiel. Assistance in the handling of these supplies will be provided when necessary by personnel of the depot supply squadron.

The Chemical Maintenance Company, T/O 3-47, will be provided to handle the maintenance and salvage of chemical warfare equipment of the air force which cannot be accomplished by lower echelons.

(e) Medical Section: This section is operated by the Medical Supply Platoon, Aviation, T/O 8-497. Its functions are the storage and issue of medical supplies for air force units.

c. Air Force Aviation Gasoline and Oil Depot:

This depot or depots will be operated by personnel from the supply squadron of the depot group.

d. Air Force Ordnance Ammunition Depot:

This depot is operated by the Ordnance Ammunition Company T/O 9-17. It supplies bombs and other ammunition to service center refilling points and/or direct to squadron distributing points depending on local conditions and routes of communication. Supply levels as prescribed by the air force commander will be maintained at this depot, at service center refilling points, and at squadron distributing points. Movement of ammunition will be accomplished by rail, water, or truck. Normally, deliveries are made direct to squadron airdromes, the service center dump being maintained in cases of temporary breakdown in this service. The number of these depots will depend on the size of the air force and the character of the theater of operations.

e. Air Force Chemical Ammunition Depot:

This depot is operated by the Chemical Co. Depot, Aviation T/O 3-418. This organization handles the storage and issue of incendiaries and bulk chemicals to service center refilling points and/or direct to squadron distributing points depending on local conditions and routes of communication. Normally, delivery will be made via water, rail, or truck direct to squadron airdromes. The number of these depots will depend on the size of the air force and character of the theater of operations.

When the chemical ammunition depot is not established, incendiaries will be handled by the ordnance ammunition depot.

f. Depots to be provided if ground force establishments are not available and suitably located.

(1) Air Force Quartermaster Class I Depot: This depot is operated by the Quartermaster Company Depot Subsistence, Aviation, T/O 10-477. This unit procures and issues quartermaster class I supplies required by the air force.

(2) Air Force Quartermaster Class III Depot: This depot is operated by the Quartermaster Company, Class III Depot, Aviation, T/O 10-467. It stores and issues quartermaster class III supplies required by the air force.

(3) Air Force Engineer Depot (Camouflage and Construction Materiel): This depot is operated by the Engineer Company Depot, T/O 5-47. It stores and issues camouflage and construction materiel required by the air force.

g. Other 4th Echelon Requirements:

The following additional organizations are provided for the service command 4th echelon activities:

(1) Air Transport:

The use of air transport in theaters where long or difficult communication lines exist is essential to the adequate and timely supply of an air force. In theaters where lines of communication are short, satisfactory results are obtained by use of motor transport.

The assignment of transports to an air force service command will therefore be variable. In theaters where the use of air transport between the air force general depot and the service center or dispersed airdromes is desirable the provision of one transport squadron, T/O 1-317, per depot group is considered normal.

(2) Quartermaster Truck Companies, T/O 10-57:

These units supplement the water, rail, and air transport facilities in the air force area in the transport of materiel and personnel. They may be called upon to supplement service center truck transport when these facilities are overloaded during peak operations.

The number of truck companies required will depend on:

(a) Length of truck haul.

(b) Road nets and condition and class of roads.

(c) Rail and water transport facilities available.

(d) Terrain.

(e) Intensity of hostile operations.

(f) Extent to which ground force depot installations are used.

One Quartermaster Company, Truck, T/O 10-57, has been provided for each depot group. Additional truck companies will be required in some theaters.

(3) Ordnance Companies, Medium Maintenance, Aviation, T/O 10-487:

These units provide third echelon motor transport maintenance for motor vehicles of the command. The number of medium maintenance companies will depend on the number of trucks supplied to the command. They may be called upon to supplement the service center medium maintenance companies when required by the exigencies of the situation.

(4) Engineer Construction Troops:

(a) In some cases construction will have been accomplished by the S.O.S. However, in active theaters where construction is undertaken in the theater of operations, engineer aviation battalions T/O 5-415, will be provided to operate under control of the air force commander. The number of battalions will depend on the amount of construction anticipated and on the intensity of hostile bombardment necessitating reconstruction. Normally, engineer battalions will be provided on the basis of one for each two combat groups.

(b) Other Engineer Task Force Organizations

(1) ' Engineer Regiment, Aviation, T/O 5-411. - This is an organization designed for operation in a major theater where a large volume of work is concentrated in a small area. Its functions are the same as the engineer battalion, Aviation. When construction is widely scattered, the engineer battalion is better suited.

(2) ' Engineer Headquarters Company, Air Forces, T/O 5-800-2. - This organization is provided for the purpose of performing necessary drafting, design, surveying, planning, and coordinating in connection with activities of the engineer aviation battalions and regiments. This unit operates under the air force engineer, either on the air force or service command staff. One such unit is normally provided per air force; although in large theaters, additional units will be required.

(3) ' The Engineer Topographical Company, Aviation, T/O 5-447. - This unit has the function of making aeronautical and target charts and mosaics from aerial photos taken by photographic groups of the air force. It works closely with the combat photo groups and is provided on the basis of one per air force.

(4) ' Engineer Camouflage Battalion (Avn), T/O 5-95. - This unit is specially equipped and trained for the supervision and execution of camouflage activities and is provided on the basis of one unit to a major theater of operations.'

(5) Signal Construction: In some cases signal construction will have been accomplished by the S.O.S. However, considerable signal construction will have to be accomplished in the theater of operations and under the control of the air force commander, and communication lines must be maintained. The Signal Construction Battalion T/O 11-225 will be provided for this purpose. The number of battalions required will depend upon the theater. Two battalions per air force is considered an average requirement.

(6) Chemical Company Impregnation T/O 3-77: This organization is charged with the impregnation of clothing and is provided on a basis of one per 50,000 men.

(7) Labor: In the air force depot area considerable labor will be required to supplement specialists of depot organizations in handling supplies. The Aviation Squadron, Separate, T/O 1-1217 and the Quartermaster Company, Service, T/O 10-67 are organizations of labor troops designed for this purpose. The number of these units to be assigned to an air force will depend upon the availability of hired labor in the air force area. Normally, one will be provided per major theater.

(8) Airdrome Defense: The Air Base Security Battalion, T/O 7-415, is a unit being organized and trained to provide the required airdrome defense against attack via ground, parachute troops, airborne troops or air attack. This unit, or a section thereof, will be required at each airdrome and large supply point in the theater. When this unit is not available, the theater commander will provide ground force units for airdrome defense. One MP Co., T/O 19-217, will be provided each depot group for interior guard purposes.

(9) Other required services not provided for herein will be furnished by the S.O.S., or separate organizations will be provided to operate under the air force. This applies to such organizations as: Quartermaster Companies, Laundry (Semi-Mobile) T/O 10-167, Bakery T/O 10-147, Sterilization T/O 10-177, Refrigeration Mobile T/O 10-247, Sales T/O 10-157, Graves Registration T/O 10-297, Heavy Maintenance T/O 10-47, Salvage and Repair T/O 10-237, and Engineer Heavy Shop Co. T/O 5-357.

4. The Service Center:

a. General: The service center is a mobile organization provided to establish and operate the necessary third echelon maintenance and supply points within close supporting distance of the combat units. The extent of dispersion of an air force normally will extend the boundaries of the air force area beyond the efficient range of a single supply and service establishment. The service center is therefore set up on a basis of one for dispersed airdromes of two combat groups. The service center should be close enough to permit truck delivery of supplies and normally not over a four hour radius.

Service is direct to each unit airdrome in the area being serviced. Requisitions and requests for service go direct from each squadron airdrome to the service center except when the squadron is drawing supplies direct from a ground force establishment. The service center controls the flow of all supplies from the air force depots to the combat unit, and likewise all administrative reports are processed through the service center. Strength returns, expenditure reports, and requisitions from combat units are received and consolidated here and transmitted to the depots on the basis of which supplies move forward.

The service center provides the following services for air force units in its area:

(1) Administrative supervision of all service elements and air force supply points other than squadron distributing points.

(2) Third echelon of aircraft maintenance, supply, and reclamation.

(3) Motor transport supply service.

(4) Third echelon of motor vehicle maintenance, supply, and salvage.

(5) Third echelon signal maintenance, supply, and salvage.

(6) Third echelon ordnance maintenance, supply, and salvage.

(7) Instrument landing service for airdromes designated.

*(8) The required number of class I and III supply refilling points.

*(9) A refilling point for camouflage and construction materiel.

*(10) Quartermaster salvage service.

(11) A purchasing and contracting service.

(12) Photographic laboratory and ground photographic service.

(13) Finance service, including payment of troops in the area.

(14) Engineer maintenance service.

*Ground force refilling points for materiel common to both air and ground forces will be used when available and suitably located.

b. Organization and Functions: The following units make up the service center:

(1) Headquarters and Headquarters Squadron Service Group, T/O 1-413. This unit provides the service center headquarters, including medical, finance, chemical, and quartermaster special staff sections. The commanding officers of the other service units assigned act as staff officers for their respective services. It also provides instrument landing and photographic sections, transportation section for the group organizational motor pool, and the squadron headquarters.

(2) Two Service Squadrons, T/O 1-412. These units provide equipment and the personnel to operate the air force engineering section and technical supply

which are responsible for the third echelon of maintenance and supply for the service center area. Where only one combat group or its equivalent is being served, the service group will include only one service squadron.

(3) Quartermaster Organizations:

(a) Two quartermaster truck companies, T/O 10-57.

(b) Two quartermaster medium maintenance companies, T/O 10-487.

(c) Quartermaster Company Service Group, T/O 10-437. These organizations perform the following functions.

(1) ' Operate service center motor transport pool and provide motor transport service.

(2) ' Provide third echelon of motor vehicle maintenance.

(3) ' Operate necessary quartermaster class I and class III refilling points.

(4) ' Operate a quartermaster class I and class III distributing point for the service center.

(5) ' Provide quartermaster salvage service.

(6) ' Procure, store, and issue quartermaster class II and IV supplies for air force units.

(7) ' Provide purchasing and contracting service for the service center area.

Where only one combat group or its equivalent is being served, only one truck company, one medium maintenance company and one quartermaster company, service group, reduced, will be provided.

(4) Ordnance Company (Air Base). T/O 9-167.

This name will be changed to Ordnance Company Service Group, Its functions are to:

(a) Procure, store, and issue class II and IV ordnance materiel for all units in the service center area.

(b) Operate a reserve supply dump of class V supplies for emergency use in the service center area.

(c) Operate the required ordnance class V RP's in the service center area.

(d) Operate an ordnance repair shop for the third echelon repair of ordnance equipment.

(5) Signal Company, Service Group, T/O 11-237. The functions of this organization are to:

(a) Procure, store, and issue all classes of signal supplies for the service center area.

(b) Operate the service center wire, radio, and telephone systems.

(c) Install and maintain wire lines of communication for the service center.

(d) Perform third echelon of repair of signal equipment for all units in the service center area.

(6) Military Police Company, T/O 19-217. One company normally provides interior guard for all elements of the service center, including the ordnance ammunition and bomb dump.

(7) Medical Section: All medical personnel are provided in the Tables of Organization for the service group and engineer battalion. These personnel perform the following functions:

(a) Provide a dispensary for medical and dental service to service center personnel.

(b) Procure, store, and issue medical supplies to all units within the service center area.

(8) Chemical Section: A chemical staff is provided in the Tables of Organization for the headquarters and headquarters squadron service group. This section supervises the chemical warfare training of the service center personnel, decontamination, and the activities of the chemical air operations company (M & H, L or D) T/O tentative, when this unit is engaged. It also supervises the procurement, storage, and issue of chemical warfare material, except bulk chemicals and incendiaries, by the technical supply officer.

The chemical air operations company is provided on a basis of one per combat group using bulk chemicals. This company operates the required service center RP's and airdrome DP's for bulk chemicals. Incendiaries in the service center RP's are handled by the ordnance company.

(9) Engineer Construction and Maintenance Troops: The number of engineers provided will depend on local conditions, namely:

(a) New construction required.

(b) Reconstruction required as a result of enemy activity.

(c) Availability of local construction facilities.

Normally, from one Engineer Company, T/O 5-417, to one Engineer Battalion (aviation), T/O 5-415, will be made available from the engineer troops provided for the service command. The functions of this unit are:

(a) 'Provide engineer construction and maintenance service for the service center area.

(b) 'Operate the service center refilling point for camouflage and construction materiel where a ground force supply point is not available.'

An organizational function chart depicting the organization and functions described above is shown in Figure 4.

5. Combat Squadron Service Functions: Tables of organization and Tables of Basic Allowances for combat squadron are designed to make the squadron self-sufficient for the 1st and 2d echelon of maintenance and supply except when bulk chemicals are used, in which case the chemical air operations company will provide detachments to operate the squadron chemical distributing point. Personnel are provided in the ground echelon of the squadron for the operation of all other squadron distributing points. All requisitions and requests for 3d and 4th echelon service will be transmitted to the service center. All housekeeping functions such as administration, messing, police, camp pitching and striking, maintenance and operation of the squadron airdrome ammunition storage area, are functions of the squadron ground echelon.

Military Police companies, on the basis of one for each combat group, will be provided for interior guard. Security battalions, on the basis of one for each combat group, will be provided for airdrome defense. If the situation requires further measures, necessary facilities will be obtained from the theater commander through the air force commander.

Section III (To be published)

Organization Within the Continental United States and Certain Territories and Departments

NOTE: W.D. Circ. No. 245, July 25, 1942, transfers responsibility for motor maintenance from the Quartermaster Corps to the Ordnance Department. This circular also directs the transfer of organizations of the Quartermaster Corps engaged on motor maintenance activities to the Ordnance Department, and the assignment to temporary duty with the Ordnance Department of all Personnel engaged in these activities. Accordingly, pending publication of detailed instructions to implement this directive, portions of this regulation dealing with motor maintenance will be construed as pertaining to the Ordnance Department instead of the Quartermaster Corps.

By command of Lieutenant General ARNOLD:

GEORGE E. STRATEMEYER,
Major General, U. S. Army,
Chief of the Air Staff.

OFFICIAL:

WILLIAM W. DICK,
Colonel, AG.D.,
Air Adjutant General.

HEADQUARTERS ARMY AIR FORCES
OFFICIAL
WAR DEPARTMENT

DISTRIBUTION: "A"
4 Attachments - Figures I, II, III and IV

3-1220,AF.

TASK FORCE SERVICE COMMAND ORGANIZATION

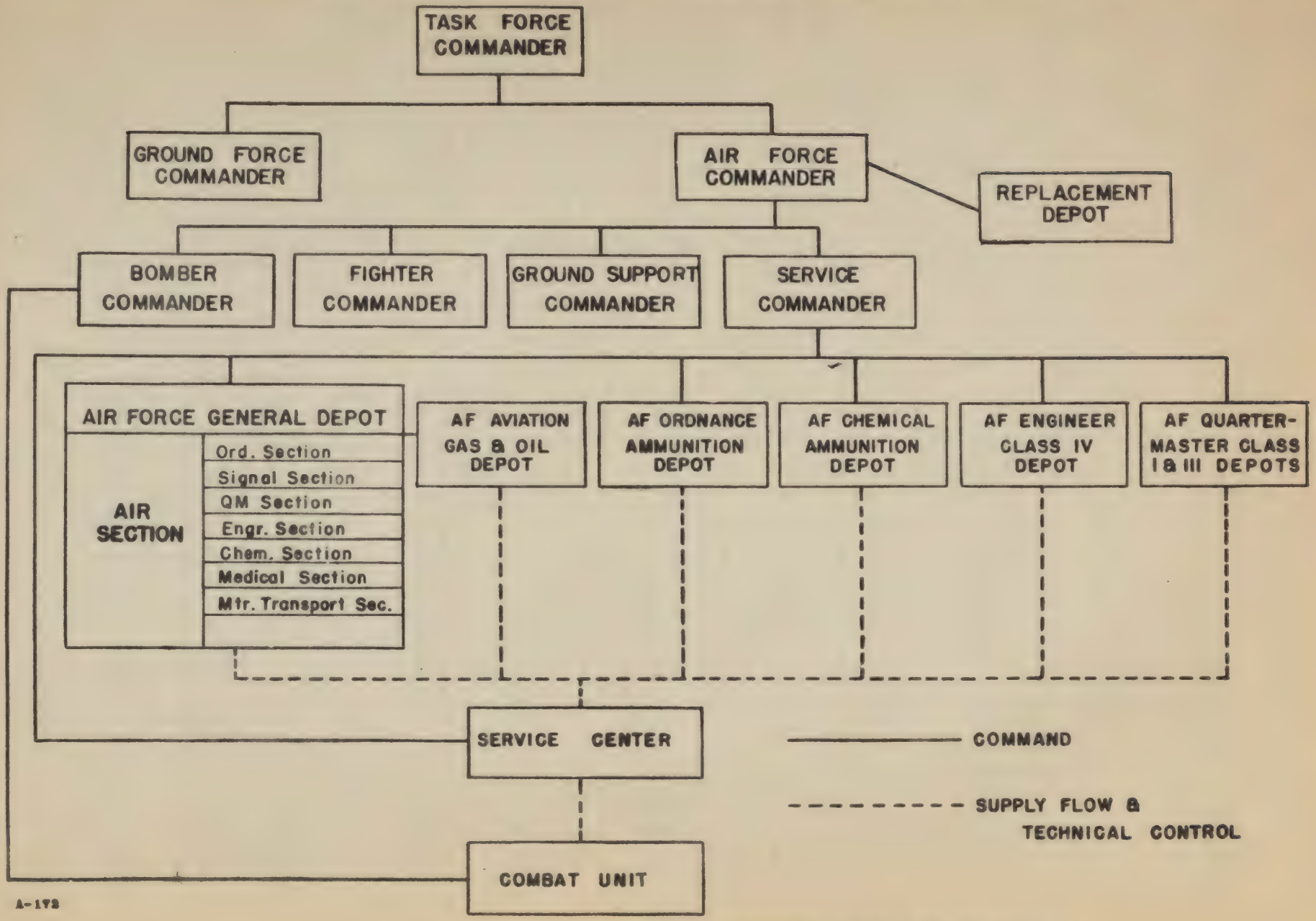

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FIGURE 1 (Attachment to AAF Reg. No. 65-1)

A.A.F. MEMORANDUM)
NO. 25-4)

WAR DEPARTMENT
HEADQUARTERS, ARMY AIR FORCES
WASHINGTON, June 30, 1942

MEDICAL

Prevention of Flying Fatigue

(This Memorandum supersedes AAF Bulletin, No. 42-6, Feb. 26, 1942)

1. This term, flying fatigue, as hereinafter used is a condition that may be observed during the flying life of an individual, as the result of an abnormal strain being placed on a normal individual. It is particularly found in members of combat crews engaged in combat mission. Both pilots and air crews alike are affected.

2. The characteristics of flying fatigue are various and variable, but in every case there is a sufficiency of symptoms and signs which are as likely to be spotted by a good squadron or flight commander as by the squadron medical officer. If not diagnosed early, irreparable harm may be done to the individual and he may be permanently lost to the Air Forces. If it is to be diagnosed early, it is essential there be close liaison between squadron and flight commanders and squadron medical officers.

3. As a general guide to the diagnosis of the condition, it is especially likely to occur at certain periods in the flying life of an individual. Roughly speaking, symptoms of flying fatigue first make their appearance in fighter pilots who have passed 120 hours of such flying. It should be pointed out that there is another period where its appearance may be seen in those individuals who are physically below par. It is not so dangerous as the periods above described because the affected person usually reports to his medical officer before serious harm has ensued. It is the period covered by the first 15-20 hours of operational flying.

4. There seems to be no yardstick by which flying fatigue can be measured. The factors determining flying fatigue are not simply long hours of duty, hurried meals, curtailed sleep, etc. Mental tension on the ground can be a potent factor. For example, interceptor pilots when on the alert react with a feeling of excitement, anticipation, and alertness to telephone calls which might be an order to take to the air, whereas more frequently they are false alarms in this respect.

5. The bodily and mental fatigue of operational flying seems disproportional to the physical effort involved. Pilots returning from an engagement often feel exhilarated but "washed out", whereas there is no such affect from a nonoperational flight of similar duration.

6. The average pilot is capable of from 100 to 130 hours of operational flying, after which he experiences increasing physical and mental tiredness or boredom during the day and unrefreshing sleep at night. When in this condition, his reaction to tactical situations is neither as rapid nor as satisfactory as it should be. He clearly recognizes the condition in himself, but hesitates to speak of it for fear of someone misinterpreting. The natural corollary to unrelieved fatigue is the appearance of nervous symptoms having an anxiety background. Pilots with a strong sense of duty will not report sick until they are definitely ill, and for this reason it is difficult to detect early fatigue symptoms.

7. The real problem is the prevention of flying fatigue. This is fundamentally and primarily an administrative responsibility, the measures of prevention covering such matters as discipline, leave and rest periods, recreation and diversion, suitable living quarters, comforts on and off duty, etc. Unless these remedies are properly controlled and applied, the only result can be an ever-increasing number of cases of

fatigue, many of which will be stressed to the danger point which will render them unfit for any further flying. In the normal individual, physical and mental fatigue are the predominating factors. The fatigue endured by bomber crews is often of a devastating physical character as the result of cramped crew positions (gunners) and extremely cold conditions on long flights.

8. The following suggestions are offered as a guide to commanding officers in offsetting and combating the devastating effects of flying fatigue within their organizations:

a. Using young individuals on combat missions insofar as possible.

b. The assignment of medical officers to squadrons who are familiar with the problems of flying, and who are good mixers and keen observers. The medical officer should enjoy the privilege of having the confidence of his squadron. No rule of thumb instructions can produce in him the qualities he should have. No one can detail the activities of a wise friend.

c. The even spacing of operational effort required of the individual, i.e. not four missions one week and one the next.

Bomber - A minimum of 24 hours between missions.

Fighter - On 8 hour alert, off 16 hours during which time he is subject to call.

d. The limit of effort required of an individual should be definitely set up and held inviolate, except under very unusual circumstances. The aim should be:

Fighter - 90-110 hours operational flying or 6 weeks.

Bomber - 120-130 hours operational, 20 missions or 3 months.

Leave should then be given in manner to be discussed later, followed by a short period of alternative employment before return to operational duty, The nature of the alternative employment should not be to give a sudden rest as might be produced by a long leave, but to provide flying duties which will carry no operational risk, and yet keep the individual fully occupied and prevent possible reaction after removal from operational strain.

e. Long leave of absence should not be given - 7 days as a rule, and not over 14 under any circumstances. Leaves should be at regular intervals, and only exceptional circumstances should be allowed to interfere. The following schedule is offered:

½ day every three or four days.

48 hours every two weeks.

7 days at end of limit of effort.

More than 7 days' leave at one time appears to encourage a disinclination to return to operational flying.

f. Upon completion of a mission, crews should be taken to a point 3 to 5 miles from the airdrome for sleep and rest.

g. The importance of tactfully organizing games at operational stations cannot be overemphasized.

h. Mild degrees of anoxia increase fatigue. Strict oxygen discipline should be insisted upon.

i. It is important to realize that pilots fear weather conditions as much as enemy action, and in determining leave and rest periods due allowance for weather conditions must be made.

j. Pilots, where squadrons have suffered many casualties, should be given frequent rest periods.

k. New personnel joining operational units should be carefully watched during the first fifteen or twenty hours of operational flying. It is during this period that these persons who are unable to face the strain of operational flying reveal their inadequacy.

l. It must be emphasized that once flying stress has developed, no attempt should

be made to treat it in the squadron by giving sick leave, etc. This, in fact, may be harmful. The pilot should be given hospital treatment.

Once having been removed from flying status, he should not be allowed to remain at the station among tired men. The condition is infectious.

By command of Lieutenant General ARNOLD:

MILLARD F. HARMON,
Major General, U. S. Army
Chief of the Air Staff

OFFICIAL:

WILLIAM W. DICK,
Colonel, A.G.D.
Air Adjutant General.

DISTRIBUTION:
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A.A.F. MEMORANDUM)
NO. 25-5)

WAR DEPARTMENT
HEADQUARTERS ARMY AIR FORCES
WASHINGTON, July 14, 1942

MEDICAL

Vision at Night

1. The ability to see dimly illuminated objects at night is of great importance in modern aerial warfare. This is, however, a faculty that many men have used but little because they have seldom lacked the assistance of artifical illumination. Training in the use of night vision and the identification of those who are especially proficient in this sense will accordingly improve the efficiency of our flying personnel.

2. An individual who has good day vision is not necessarily able to see well at night. This is because we use quite different structures and mechanisms within the eye for seeing in relatively bright lights and in the dark. The sense organs used for the recognition of detail are located mostly in the central portion of the retina and are stimulated only by fairly intense illumination. The image of an object looked at directly is formed on these sense organs. Another type of sense organ which is profusely distributed throughout the peripheral or outlying portions of the retina reports to the brain less accurate information concerning the shape of objects, and is responsible for the general background of our visual impressions. It is these sense organs, however, that are especially sensitive to faint lights, and thus make possible the perception of dimly illuminated objects.

The peripheral retina must therefore be used for the detection of objects at night. To do this, the gaze should be directed a little to one side of the field that is being observed. It is also helpful to move the eyes slowly back and forth across the field so that the image of the object will move across the peripheral retina. Such procedures are usually not necessary on bright moonlit nights, but under starlight, averting the gaze by only a few degrees increases the efficiency of seeing.

3. It is a familiar observation that it is most difficult to see in the dark immediately after coming from a brightly lighted room. This is because the sense organs for weak lights become insensitive under intense illumination and require as long as forty minutes in darkness to regain their maximum sensitivity. The brighter the light and the longer the exposure, the greater will be the loss of sensitivity and the more prolonged the period of recovery. It is therefore, necessary to remain in the dark surroundings if possible for half an hour before undertaking night operations. Complete darkness is not necessary but no light brighter than a candle should be used in a ready room. In brightly lighted rooms, it is desirable to wear red goggles for one-half hour before take off, inasmuch as red light is less harmful to night vision that other colors. During flight, illumination of the cockpit and of the instrument panel should be kept as low as possible. If for any reason it is necessary to turn up the instrument lights or to use a bright light for reading a map, it should be done as briefly as possible,

4. Night vision is impaired by small amount of scattered light for this reduces the contrast between faint lights and their backgrounds. It is therefore necessary to keep goggles, enclosure windows, and windscreens scrupulously clean and free from scratches in order to prevent the scatter of light over the field of vision.

5. Among the many harmful effects of flying at high altitude without an adequate supply of oxygen is an impairment of night vision. When oxygen is not taken, the ability to see dimly illuminated objects is decreased a measurable amount at an alti-

tude of only five thousand feet, and decreases progressively at higher altitudes. This handicap will be avoided by the invariable use of oxygen from the ground up in night flights.

6. The night vision of normal persons may become seriously impaired if they do not receive adequate amount of Vitamin A in their diet. It is accordingly desirable to provide an adequate diet such as that which is usually available to our flying personnel. When conditions make impossible the provision of a diet containing sufficient amounts of Vitamin A for the preservation of good night vision, supplemental doses of this vitamin will be provided through the quartermaster under the direction of the medical officer.

Multivitamin capsules are now available (Medical Department Supply Catalog, Item NO. 1.K61500). When these vitamins are required as a supplement to the rations they are charged to the funds allocated to the Quartermaster General, while vitamins required for the treatment of vitamin deficiencies as a therapeutic measure are supplied by medical funds.

It is to be emphasized that the use of vitamin tablets by individuals already receiving an adequate diet will not in general improve their night vision.

7. Regardless of the sensitivity of the eye under low illuminations, practical training in seeing at night, as outlined above, will greatly increase the individual's ability. Although few suffer from night blindness, there are marked differences among individuals in respect to their ability to see well in the dark. It is desirable to eliminate from night duty those who are poor and to select for especially exacting work those who are exceptionally good. Such a selection can often be made on the basis of demonstrated performance.

In order to aid such a classification, the Office of the Air Surgeon proposes to introduce a simple test for Army Air Forces personnel that will measure an individual's ability to perceive objects under a low intensity of illumination. This will not necessarily determine his proficiency in night operations. That will depend upon a man's power of concentration and his alertness, upon his training and experience as well as upon the inherent sensitivity of his eyes.

Careful attention to these principles and procedures relating to night vision will promote the efficiency of the Army Air Forces in night operations.

By command of Lieutenant General ARNOLD:

GEORGE E. STRATEMEYER
Major General, U. S. Army
Chief of the Air Staff

OFFICIAL:

WILLIAM W. DICK
Colonel, A.G.D.
Air Adjutant General

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WAR DEPARTMENT

A.A.F. MEMORANDUM)
NO. 25-7)

HEADQUARTERS, ARMY AIR FORCES
WASHINGTON, August 5, 1942

MEDICAL

Physical Examinations of Personnel assigned to High Altitude Stations.

1. A change of residence from sea level to 10,000 feet, or above, very frequently produces symptoms of headache, fatigue, or general malaise, particularly when the change is made rapidly, or when the change is accompanied by activity. In virile, healthy individuals these minor symptoms usually disappear in a few hours to a few days, after which time the individual is comfortable. He should then gradually assume his normal activities. Physical and mental activity should be encouraged up to a point just short of producing symptoms. This controlled activity is desirable due to the fact that it has been shown that the individual who gradually increases and maintains his activity tends to acclimatize while even the acclimatized individual who becomes sedentary tends to lose his acclimatization and have symptoms if he again becomes active.

2. Many chronic diseases and minor disorders are exaggerated at high altitudes; but normal, healthy individuals practically without exception will acclimatize themselves sufficiently within a few weeks to carry on normal activities. The activities of individuals residing at high altitudes are in general restricted when compared to sea level, somewhat similar to the restriction of activities under tropical conditions. All excesses should be avoided on changing residence to high altitudes, expecially mental and physical activity for the first few weeks until acclimatization is fairly well established.

3. Prior to departure for duty at altitudes above 10,000 feet all individuals will be given a complete physical examination, as prescribed by the Air Surgeon. This examination will include x-ray of the chest and blood count. Notation thereof will be made in the service record of the individual, or other appropriate medical records.

By command of Lieutenant General ARNOLD;

GEORGE E. STRATEMEYER
Major General, U.S. ARMY,
Chief of the Air Staff

OFFICIAL

WILLIAM W. DICK
Colonel, A.G.D.
Air Adjutant General

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AAF TRAINING STANDARD)
No. 110-1-1)

HEADQUARTERS, ARMY AIR FORCES
WASHINGTON, 26 APRIL 1944

TRAINING FOR UNITS AND INDIVIDUALS OF THE MEDICAL DEPARTMENT OF THE ARMY AIR FORCES

(This Training Standard supersedes Training Standard 110-1-1, 19 June 1943.)

1. **PURPOSE.** The purpose of this Training Standard is to establish the minimum medical training requirements necessary to prepare Medical Department personnel and units for combat duty with the AAF. These standards are to be attained before the unit or individual is moved to a theater of operations or other place outside the continental United States for combat duty.

2. **UNITS:**

a. In addition to specific standards for units and sections listed in paragraphs 2b to h below, all medical units and sections will establish standing operating procedures for, and become proficient in:

(1) The establishment and operation of sanitary devices and disease prevention measures.

(2) Passive defense measures for the protection of medical installations.

b. Squadron and battalion medical sections will establish standing operating for, and become proficient in:

(1) The establishment and operation of an aid station, dispensary, and prophylactic station.

(2) The provision of medical service during air, rail, and motor movements.

(3) The collection and evacuation of casualties.

(4) The performance of the medical mission connected with crash and rescue procedures.

c. Group and regimental medical sections will establish standing operating procedures for, and become proficient in:

(1) The administration and operation of the medical section when functioning as:

(a) Group or regimental aid station.

(b) Separate squadron or battalion medical section.

(c) Group dispensary.

(2) The establishment and operation of a dental clinic.

d. The Medical Supply Platoon, Aviation, will establish standing operating procedures for, and will become proficient in:

(1) The establishment and operation of the medical supply section of an air force general depot.

(2) The procuring and storing of medical supplies, and the issuing of medical supplies to all AAF installations such as medical section of the Depot Group, medical section of the Service Group, medical section of the Combat Group or Squadron, Medical Dispensaries Aviation, and to any other organization or branch of service incident to the tactical situation.

(3) The maintenance of the prescribed level of medical supplies, and the rendering of assistance to forward units to enable them to maintain the required level.

(4) The maintenance of proper liaison between consuming units and issuing agencies.

(5) The movement of medical supplies forward in the most expeditious manner.

e. The Medical Dispensary, Aviation, will establish standing operating procedures for, and will become proficient in:

(1) The establishment and operation of a dispensary in the field.

(2) The movement of a dispensary by air, rail, or motor, under daylight and blackout conditions.

(3) The maintenance of liaison with all units served, in order to effect efficient medical service and evacuation of casualties.

f. The medical sections of Air Depot Groups will develop standing operating procedures for, and will become proficient in:

(1) The establishment and operation of a Group Dispensary, Squadron Aid Stations, and Prophylactic Stations.

(2) The establishment and operation of the medical supply section of an air force general depot.

(3) The maintenance of liaison with all elements of the air force general depot area, in order to effect efficient medical service and evacuation of casualties by air, rail, or motor.

g. The medical sections of Service Groups will develop standing operating procedures for, and will become proficient in:

(1) The establishment and operation of a Group Dispensary and Squadron Aid Stations, and Prophylactic Stations.

(2) The maintenance of liaison with all elements of the Service Center area, in order to effect efficient medical service and evacuation of casualties by air, rail, or motor.

(3) The establishment and operation of a medical supply section of a Service Center.

(4) The movement of a Group Dispensary and Squadron Aid Stations by air, rail, or motor, under daylight and blackout conditions.

h. The Medical Air Evacuation Transport Squadron will establish standing operating procedures for, and become proficient in:

(1) The classification and sorting of evacuees.

(2) The loading and unloading of patients, using the various aircraft employed in air evacuation, and including the necessary administrative procedures and property exchange.

(3) The medical care of patients during flight.

3. INDIVIDUALS:

a. All Medical Department Officers and Nurses. All Medical Department officers, and all members of the Army Nurse Corps, on duty with the AAF, will have general background of information concerning the Army as a whole, and of the organization and functions of the arms and services, so that professional knowledge may be applied to problems peculiar to the military. Minimum training requirements will include:

(1) A thorough knowledge of:

(a) Military courtesy and customs of the service as set forth in AR 600-10, FM 21-50, and Ch. 2, FM 21-100.

(b) The Articles of War, as set forth in AW 104 and AW 110.

(c) Close Order Drill, as set forth in Ch. 7, 9, (except pars. 166 to 169, inclusive), and 10, FM 21-100.

(d) Military hygiene and sanitation, as set forth in AR 40-205.

(e) Minor surgery and emergency treatment, including the treatment of gas casualties, as outlined in Secs. I and II, Ch. 2; Secs. I to V, inclusive, Ch. 3; and Ch. 7, TM 8-220.

(f) Rules of land warfare, as set forth in Ch. 1, TM 8-220.

(g) Prevention and control of communicable diseases, as set forth in AR 40-210, including malaria control as set forth in WD Circ. 223, 1943, and Training Circ. 108, 1943.

(h) Military correspondence, as outlined in AR 340-15.

(2) A general knowledge of:

(a) Army Regulations, especially AR 1-5.

(b) The organization of the Medical Department of the Army, as set forth in Pars. 1 and 2, AR 40-10.

(c) Organization of the Medical Department of the AAF.

(d) Military training methods, as outlined in FM 21-5 and TF 7-295.

(e) Military medical tactics, as detailed in Ch. 1; Sec. III, Ch. II; and appendix I, FM 8-10.

(f) The methods of safeguarding military information, as set forth in AR 380-5.

(g) Medical Department administration, as set forth in pars. 6 to 10 and pars. 19 to 20, inclusive, AR 40-590; AR 40-1005; and, pars. 1, 2, 3, 6, 7, and 9, AR 40-1705.

(h) Records of morbidity and mortality, as set forth in FM 8-45.

(i) General military administration, as outlined in Ch. 2; and Sec. III, 12-250.

(j) Passive defense against chemical, air, and mechanized attack, to include booby traps, anti-personnel mines, hasty entrenchment, cover and concealment, and camouflage.

(k) Physiological aspects of flying, as set forth in TM 1-705, AAF Memo 25-2, 25-4, and 25-5; AAF Reg. 25-13.

b. Medical Corps Officers. In addition to the subjects listed under paragraph 3a above, medical corps officers are required to be proficient in:

(1) Field medicine and surgery, especially as set forth in Secs. I, II, III, IV, V, VII, Ch. 3; Secs. I, II, III, IV, V, Ch. 4, TM 8-220, and TM 8-285.

(2) Physical examination as required by the Army, other than WD AGO Form 64 (AR-110), as set forth in 40-100, AR 40-105, and MR 1-9.

(3) The duties of the medical inspector, as set forth in AR 40-270.

(4) The duties of a medical officer as a staff officer, as set forth in paragraph 2b, AR 40-10.

(5) Military hygiene and sanitation, as set forth in FM 8-40 and FM 21-10.

c. Aviation Medical Examiners and Flight Surgeons. In addition to the subjects listed under paragraphs 3a and b, aviation medical examiners and flight surgeons will be proficient in:

(1) The principles and technique of the physical examination for flying, including the use of special equipment required in conducting the physical examination for flying, as set forth in AR 40-110, WD AGO Form 64, and AAF Memo 25-7.

(2) Medical specialties as related to Aviation Medicine, including altitude indoctrination.

(3) Physiology of Flight, as set forth in "Physiology of Flight" by the Aero Medical Research Laboratory, Experimental Engineering Section, Materiel Command, Wright Field, Dayton, Ohio.

(4) Physical care of fliers, as set forth in AAF Memorandums and Regulations.

d. Dental Officers. In addition to the subjects listed under paragraph 3a dental officers will be proficient in:

(1) Field dental administration, as set forth in AR 40-1010.

(2) Use of field dental equipment and supplies.

(3) Dental classification of individuals in the military service, paragraph 3, AR 40- 510, and as amended by Change 1, 1942.

(4) Prevention of dento-oral diseases and deficiencies, as outlined in paragraph 6b, AR 40-15.

(5) Professional duties of the dental officer.

e. Veterinary Officers. In addition to the subjects listed under paragraph 3a,

veterinary officers will be proficient in:

(1) Veterinary inspection of food, as outlined in Ch. 8, TM 8-220.

(2) The preparation and rendition of field veterinary reports as outlined in paragraph 10, AR 40-2235.

(3) Field veterinary medicine and surgery, as set forth in Sec. VI, Ch. 3; and Sec. VI, Ch. 4, TM 8-220.

f. Sanitary Corps Officers. In addition to the subjects listed under paragraph 3a above, officers of the Sanitary Corps assigned to the AAF for field service will be proficient in:

(1) The duties of a sanitary engineer, as outlined in paragraph 3a, Circular Letter No. 2, SGO, 1943.

(2) Military hygiene and sanitation, as set forth in FM 8-40.

g. Medical Administrative Corps Officers. In addition to the subjects listed under paragraph 3a above, Medical Administrative Corps officers assigned to the AAF for duty in the field will be thoroughly schooled in the duties of a Medical Administrative Corps officer in the unit to which he is assigned and in the following subjects:

(1) The duties of the commanding officer of a medical detachment, as set forth in AR 40-590.

(2) The duties of a medical supply officer, as detailed in AR 40-1705.

(3) The duties of a unit supply officer.

h. Nurses of the Medical Department of the AAF. In addition to general training governing the Army Nurse Corps as set forth in AR 40-20 all members of the Army Nurse Corps assigned to the AAF will become proficient in the subject listed under paragraph 3a, and in the nursing aspects of field medicine and surgery, as set forth in Secs. I, II, III, IV, and V, Ch. 4, TM 8-220.

i. Flight Nurses. In addition to the standards prescribed in h above. Flight Nurses will be proficient in the nursing and administrative care of wounded while in flight.

j. Medical Department Enlisted Men. The individual training standard for each Medical Department enlisted occupational specialty is prescribed in the 80 series of AAF Training Standards.

4. **TRAINING OBJECTIVE.** The training objective will be considered attained only when the unit and individual have by applicatory examination, demonstrated in a practical manner, the fulfillment of the specified training standards prescribed above. The responsibility for determining that the training objective has been reached will be that of the air force or independent command surgeon, or subordinate designated by him. The air force or independent command surgeon will maintain the necessary records relative to the attainment of the training objective by units and individuals of the command.

By Command of General ARNOLD:

BARNEY M. GILES
Major General, United States Army
Chief of Air Staff

OFFICIAL:

THOMAS A. FITZPATRICK
Colonel, AGD
Air Adjutant General

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AAF TRAINING STANDARD)
NO. 110-2)

HEADQUARTERS, ARMY AIR FORCES
WASHINGTON, 16 MARCH 1944

MEDICAL TRAINING FOR ALL AAF UNITS AND INDIVIDUALS

1. PURPOSE. The purpose of this directive is to establish the medical training standards of the AAF. The objectives of medical training are to provide each individual in the AAF with a thorough practical knowledge of applicable military medical subjects and to ensure a continuous health education program in the AAF.

2. UNITS. Units as a whole will attain the following standards:

a. Proficiency in the maintenance and use of field sanitary appliances.

b. Knowledge of the sanitary measures and disease control methods necessary to maintain the health of the command.

c. Proficiency in the maintenance of sanitary and malaria discipline.

3. INDIVIDUALS. Individual standards of proficiency are prescribed separately for enlisted men, noncommissioned officers, company grade officers, and field officers, as outlined below:

a. Enlisted Men. The minimum standards of proficiency to be attained by all AAF enlisted personnel will consist of a thorough knowledge of:

(1) Military Hygiene and Military Sanitation:

(a) Personal Hygiene. A knowledge of:

1. Basic health rules and individual measures for protection and improvement of health.
2. The vital importance of personal hygiene and cleanliness, to include:
   a. Care of the skin, hair, teeth, nails, and clothing.
   b. Relationship of individual health to the health of others and to the efficiency of the unit.
3. The importance of properly fitting clothing.
4. The care of feet, including foot hygiene on the march, in camp, and in bivouac to include the prevention of fungus infections.
5. The importance of proper dietary habits.
6. The importance of adequate sleep.
7. The relationship of the medical officer to the individual soldier and the importance of early medical treatment.

(b) Sex Hygiene. A knowledge of the:

1. Dangers of venereal disease.
2. Individual methods of preventing venereal disease.
3. Responsibility of the individual to procure venereal prophylaxis.
4. Importance of early diagnosis and treatment.
5. The methods of self-administration of prophylaxis.

(c) Military Sanitation. A knowledge of or ability to carry out the:

1. General control measures applicable to respiratory diseases, intestinal diseases, insect-borne diseases, and other communicable diseases.
2. General rules of camp and camp-site sanitation.
3. Methods of obtaining and purifying water.
4. Water discipline.
5. Methods of disposal of wastes, including the ability to improvise emergency waste disposal devices.
6. General principles of mess sanitation.

7. Method of malaria transmission, and general principles of mosquito control and malaria discipline.

(2) First Aid. A knowledge of or ability to accomplish the:

(a) General principles of first aid.

(b) Causes, prevention, and first-aid treatment of shock.

(c) Methods of protecting injuries from infection.

(d) First-aid methods of controlling hemorrhage.

(e) Use of the first-aid packet.

(f) Application of bandages and dressings to all parts of the body.

(g) Emergency first-aid treatment of fractures, dislocations, and sprains, to include the improvisation of splints.

(h) Methods of preventing, and the emergency treatment of injuries due to cold, emphasizing burns, frost-bite, and immersion foot.

(i) First-aid treatment of common emergencies, including poisonous bites and stings.

(j) Precautions to be taken when handling and transporting the injured.

(k) Emergency care of gas casualties.

(l) Use of the equipment contained in the Kit, First-Aid, Aeronautic, including the indications for and the methods of administering morphine.

(3) Personal Adjustment. A knowledge of the:

(a) Personal adjustment problems in the service.

(b) Healthy viewpoint toward being in the service.

(c) Relationship between emotions, feelings, and body functions, and how to adjust to them.

b. Noncommissioned Officers. In addition to the subjects listed under Par 3a above, noncommissioned officers will attain proficiency in the following:

(1) Teaching knowledge of sanitation and first aid.

(2) Full realization of a noncommissioned officer's responsibility for the health and welfare of troops, including enforcement of health regulations, provision of sanitary facilities, and measures for the control of communicable diseases.

(3) Knowledge of personal adjustment, causes of mental breakdowns, signs and symptoms of poor mental health; realization of the importance of mental health in the Army.

(4) Exemplary conduct which will assist in the maintenance of health and correct mental attitudes in the unit.

c. Company Grade Officers. In addition to the subjects listed under Par 3a company grade officers will attain proficiency in the following:

(1) Teaching knowledge of sanitation and first aid.

(2) Knowledge of the officer's responsibility for the initiation and maintenance of proper sanitary measures within the unit and the unit area and the officer's responsibility for the health and well-being of troops.

(3) Knowledge of modern conception of personal adjustment, the adjustment processes, measures to maintain health and correct mental attitudes in the command.

d. Field Officers. In addition to the subjects listed under Par 3c above, the standard of proficiency for a field officer will consist of a knowledge of the basic principles of sanitation, first aid, and personnel adjustment problems, in order that the officer may assume responsibility as a field officer in maintaining the health and efficiency of the soldier as an individual and of the command as a unit.

4. **INDIVIDUALS WHO MUST ENGAGE IN FLYING.** All AAF personnel who must engage in flying will receive training in altitude indoctrination. This training will be given during the individual training period and as concurrent individual training during the unit and combined air forces training. Proficiency requirements will consist of the following:

a. Knowledge of the practical physiological significance of the:

(1) Composition of the atmosphere.

(2) Relationship between altitude and temperature.

(3) Altitude and barometric pressure.

b. Knowledge of the symptoms and signs of lack of oxygen. This knowledge will be based in part upon personal experience with anoxia in the altitude chamber.

c. Knowledge of the relationship between altitude and the duration of consciousness without supplemental oxygen.

d. Knowledge of the relationship between exercise and the need for oxygen.

e. Knowledge of the relationship between cold and the need for oxygen.

f. Knowledge of the use and operation of oxygen equipment, to include the proper care and fitting of the oxygen mask, and the proper operation of oxygen regulators.

g. Knowledge of the design, principles of operation, and use of all items of oxygen equipment currently used by the AAF, including walk-around and bail-out equipment. This knowledge will be gained in part through the actual use of such equipment at simulated high altitudes in the altitude chamber.

h. Knowledge of the oxygen system of the aircraft to which assigned and the methods of discovery of failure and repair of the oxygen equipment.

i. Thorough knowledge of the procedures to be accomplished in the event of individual or unit oxygen failure.

j. Knowledge of the effects of lack of oxygen upon vision, and the principles and methods of protecting night vision.

k. Familiarity with the effects of variations in altitude upon the ears and sinuses, and measures to be taken to minimize the effects. This familiarity will be gained in part from actual experience of simulated flights in the altitude chamber.

l. Familiarity with the nature, symptoms, and means of prevention of decompression sickness. This will be gained in part through experience in an altitude chamber at a simulated altitude at which decompression sickness may occur.

m. Familiarity with the effect of altitude upon intestinal gases and the means of minimizing these effects.

n. Knowledge of the effects of acceleration upon the flyer, and knowledge of protection against these effects.

o. General familiarity with the physiological stresses encountered in parachute descents, including cold, lack of oxygen, and deceleration, and methods of minimizing the stresses.

p. Familiarity with the effects of variations of altitude upon the functioning of aircraft communication systems. This familiarity will be gained in part through simulated flight in the altitude chamber.

q. General familiarity with various items of AAF personal flying and emergency equipment, including goggles, flying clothing, helmets, etc.

r. Familiarity with AAF Regulations and Technical Orders concerning the use of oxygen.

5. REFERENCES:

a. Enlisted Men:

(1) Personal Hygiene:

Sec II, Ch 1, FM 21-10
Sec II, Ch 9, FM 21-10
Pars 46, 54, & 58, FM 21-11
Sec I, Ch 14, FM 21-100
TF 8-155
TF 8-1297

(2) Sex Hygiene:

Ch 6, FM 21-10

WD TC 28, 1943
AR 40-210
AAF Memo 21-11
TF 8-1238
TF AF 277
FS 8-57
FS 8-58
FS 8-59

(3) Military Sanitation:

(a) General:
Ch 1, FM 8-40
Sec I, Ch 2, FM 8-40
Chs 1 & 2, FM 21-10
Sec I, Ch 14, FM 21-100
Chs 2 & 11, FM 31-15
Chs 2 & 3, and Appendices I to VII, Inclusive, FM 31-20
Sec II, of Appendix IV, FM 31-25
Chs 4, 6, 7, & 9, TM 1-240
TF 1-3346
TF 1-3403
FS 8-8
FS 8-64
PIF 4-7-1
TO 01-67

(b) Control of Respiratory Diseases:
Sec II, Ch 2, FM 8-40
Ch 3, FM 21-10
FS 8-2
FS 8-63

(c) Water Supply and Purification:
Ch 3, FM 8-40
Pars 246 & 252, Sec I, Ch 14, FM 21-100
Sec III, Ch 4, FM 21-10
TF 8-1174
FS 8-3
FS 8-9
FS 8-62

(d) Mess Sanitation:
Chs 5, 6, & 7, FM 8-40
Sec VI, Ch 4, FM 21-10
TF 8-999
FS 8-4
FS 8-10
FS 8-61

(e) Waste Disposal:
Ch 4, FM 8-40
Sec IV, Ch 4, FM 21-10
TF 8-1179
FS 8-1
FS 8-11
FS 8-60

(f) Intestinal Diseases:
Sec III, Ch 2, FM 8-40

Secs I, & II, Chs 4 & 5, FM 21-10

(g) Control of Insect-Borne Diseases:

Sec IV, Chs 2, 8, 9, & 10, FM 8-40

Ch 5, FM 21-10

AAF Reg 61-3

WD Cir 223, 1943

WD Trng Cir 108, 1943

TF 8-953

TF 8-1000

TF 8-1288

FS 8-5

FS 8-12

FS 8-64

(4) First Aid:

Graphic portfolio "First Aid"

Graphic portfolio "Defense Against Chemical Attack"

Pars 1-12, FM 8-35

FM 8-50

FM 21-11

FM 21-40

Sec II, Ch 14, FM 21-100

PIF 8-13-1

PIF 8-14-1

TO 01-23

TO 00-30-139

FS 8-7

FS 8-64

FS 8-69

FS 8-70

FS 8-71

FS 8-74

FS 8-77

FS 8-78

FS 8-80

(5) Personal Adjustment:

TB MED 21, 1944

b. Officers. In addition to the references used in the training of enlisted men the following references are applicable for the training of officers and noncommissioned officers.

(1) Personal Hygiene:

Sec I, Ch 9, FM 21-10

Secs V, VI, & VII, FM 21-11

Pars 7 & 8, AR 40-205

Sec I, AR 40-210

(2) Sex Hygiene:

Pars 21 through 24, AR 40-210

(3) Military Hygiene & Sanitation:

(a) General:

Sec II, Ch 8, FM 21-10

Pars 1 through 6, AR 40-205

Par 1-5, AR 40-210

WD Cir 277, 1942

(b) Control of Respiratory Diseases:

Par 10, AR 40-205
Pars 13, 14, & 15, AR 40-210

(c) Water Supply and Purification:
Par 252, TM 8-220
Par 11, AR 40-205

(d) Mess Sanitation:
Par 255, TM 8-220
Pars 12, 13, 14, & 15, AR 40-205

(e) Waste Disposal:
Par 253, TM 8-220
AR 30-2175
Pars 16 through 20, AR 40-205

(f) Intestinal Diseases:
Sec VI, Ch 5, FM 21-10
Par 254, TM 8-220
Par 22, AR 40-205
Pars 16-18, AR 40-210

(g) Insect-Borne Diseases:
Pars 258-262 TM 8-220
Pars 23-28, AR 40-205
Pars 19 & 20, AR 40-210

(h) Sanitary Inspections, Surveys, Reports, and Orders:
Chs 11 & 15, FM 8-40
Sec II, Ch 8, FM 21-10
AR 40-205
AR 40-275
FS 8-13

(4) First Aid
Pars 19-23, 27-41, 49-53, TM 8-220

(5) Personnel Adjustment Problems:
TB 12, 1944

c. References Applicable to Altitude Training:
AAF Memo 25-2
AAF Reg 50-18
AAF Reg 50-21
AAF Reg 55-7
TM 1-705
TO 00-25-13
TO 00-30 Series
TO 00-50-1
TO 03-50 Series
TO 13-20 Series
TF 1-487
TF 1-488
TF 1-489
TF 1-3308

By Command of General ARNOLD:

OFFICIAL:

BARNEY M. GILES
Major General United States Army
Chief of Air Staff

THOMAS A FITZPATRICK
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Air Adjutant General

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